

The Bandito wallops CBM—is it fair?



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For The Commodore

AMIGA®

Volume 8 No. 9 September 1993
US \$3.95 Canada \$4.95

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vs.

Interchange Plus

- Spiral Effects with Art Expression
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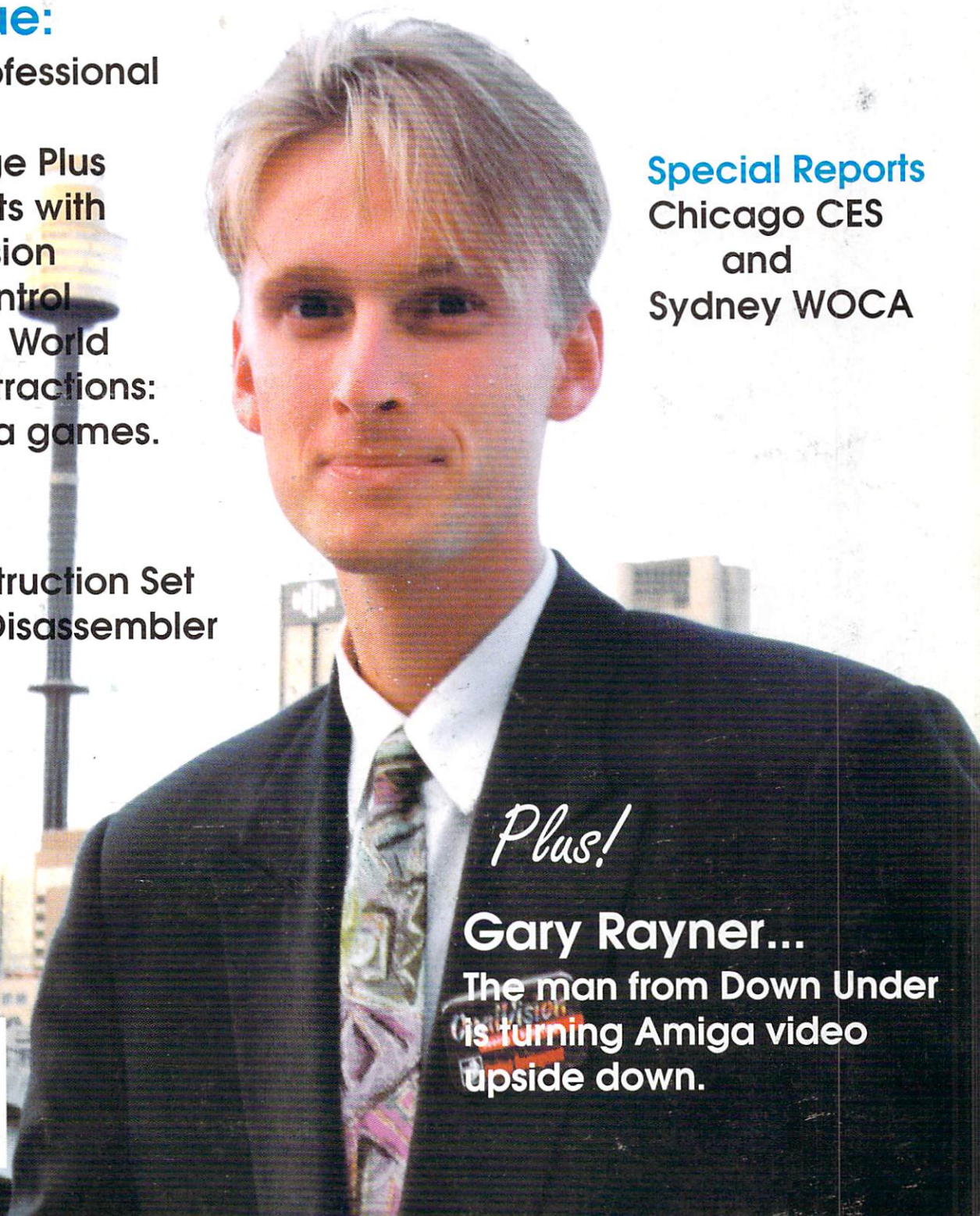
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Chicago CES

and

Sydney WOCA



Plus!

Gary Rayner...

The man from Down Under
is turning Amiga video
upside down.



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Karate game	✓	✓

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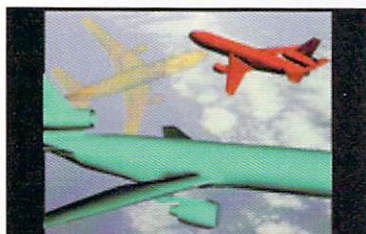


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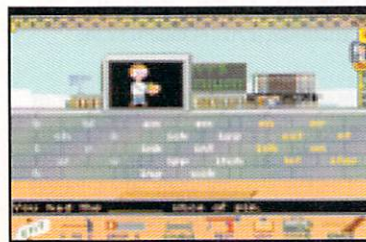
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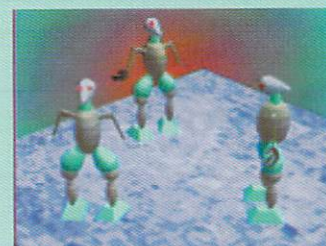
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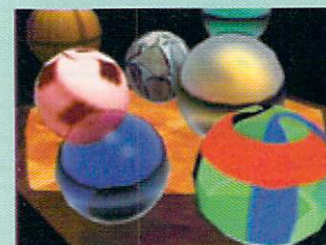
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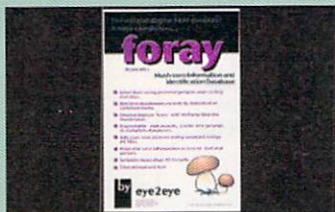


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And Furthermore...

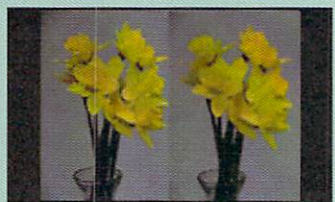
Gary Rayner is an Amiga developer with over six years of Amiga product success. Now Mr. Rayner's Australian development company, Opal Tech, is preparing to release the video modules to their highly successful OpalVision. AC caught up with him in Sydney to discuss the past, present, and future of video production on the Amiga.



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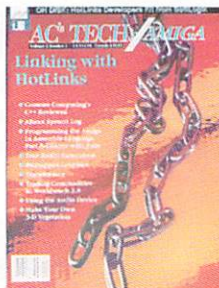
WOCA—Australia

Commodore Australia not only gathered a world of products and Amiga developers together, but also demonstrated some of the best Amiga products available from Australian Amiga developers.



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Amazing Computing For The Commodore Amiga™ (ISSN 1053-4547) is published monthly by PIM Publications, Inc., Currant Road, P.O. Box 2140, Fall River, MA 02722-2140, Phone 1-508-678-4200, 1-800-345-3360, and FAX 1-508-675-6002.

U.S. subscription rate is \$29.95 for one year; \$46.00, two years. Subscriptions outside the U.S. are as follows: Canada & Mexico \$38.95 (U.S. funds) one year only; Foreign Surface \$49.97. All payments must be in U.S. funds on a U.S. bank. Due to erratic postal changes, all foreign rates are one-year only.

Second-Class Postage paid at Fall River, MA 02722 and additional mailing offices.

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International Periodical Distributors
674 Via de la Valle, Ste 204, Salona Beach, CA 92075
&
Ingram Periodicals Inc.
1226 Hell Quaker Blvd., La Verne TN 37086

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A500 USERS

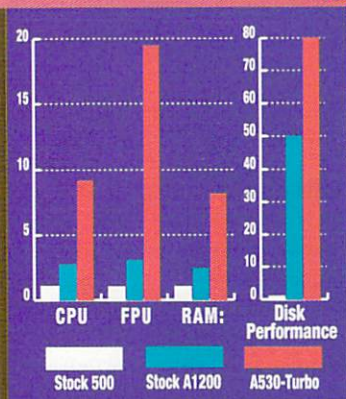
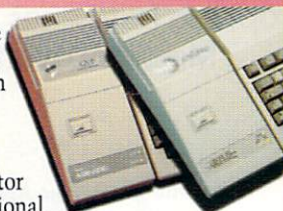
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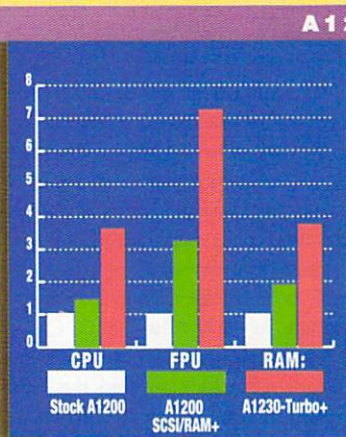
A1200 USERS

The A1200's AGA graphics are great, *but* they eat up memory and can be slow with the built-in 68EC020 processor and no FAST RAM. GVP now offers two exciting Power-Up solutions.

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A1200 SCSI/RAM+ supports faster FPU's, our tests show that the A1200's 14MHz 68EC020 cannot really take advantage of a 68882 running faster than 33MHz.

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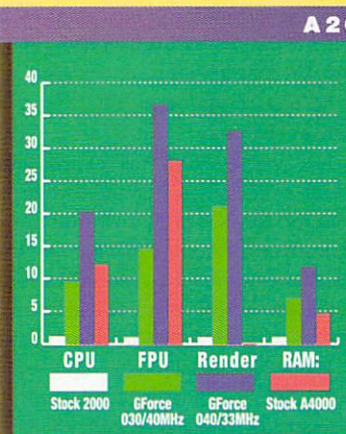
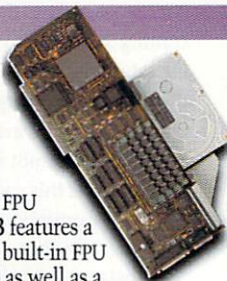
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A few words about the tests: The CPU and FPU test results were generated by AIBB 5.5 by LaMonte Koop. The Render test results for the A2000 were generated with LightWave 3D by NewTek. The RAM and Hard Disk test results were generated with DiskSpeed 4.2 by MKSoft.

Circle 106 on Reader Service card.

Worried Investors
Falling Stock Prices
Declining Market share
Executive Turmoil
Dropping Revenues
Massive Layoffs

EDITORIAL CONTENT

And this is not even Commodore.

Dissatisfaction at Apple Computer?

It is in practically every newspaper. It is on the cover of almost every news or business magazine. It is the story of a giant computer company who has seen its market threatened, watched its profits decline, and felt the heat of competitors as it battles to maintain its proprietary platform in the marketplace. But it is not Commodore. It is Apple Computer.

The July 26, 1993, cover of *Fortune* magazine shows a proud but tired John Sculley with the headline, "John Sculley: Odd Man Out." The eight-page article and sidebar inside tells of a dynamic man who has reached further than his current job could take him. It discusses Sculley's dreams and Apple's realities. I suggest anyone even slightly interested in Commodore or Apple should read it.

The bottom line at Apple appears to be that investor unrest and market share are important. In early June, Apple Computer announced that profits would fall below expectations. One estimate had the figure at only \$485 million, which (according to *Fortune*) is the same level as 1990. In addition, market share has flattened at 12% and is far below the corporate officers' goal of 20%. Apple's stock prices sank from \$57 per share to \$40. On June 18, John Sculley announced that he was resigning as CEO but would remain as chairman.

In all fairness to Mr. Sculley, everyone at Apple has officially stated that the decision was Mr. Sculley's idea. His removal from the daily business of Apple will leave him free to envision the future for Apple as he has done over the last several years. He will also retain his salary which was \$1.65 million last year.

While Michael Spindler (50) replaces John Sculley (54), few believe he will do it with the charisma that John Sculley had. However, that was the same comment made about John Sculley when he replaced Steven Jobs at the power position of Apple in 1985. And though both Sculley and Jobs were placed in positions of no power, Sculley seems more appropriate for the role of a dreamer than his predecessor.

It was under Sculley that Apple started creating diverse opportunities through large commitments to research and development.

According to *Fortune*, Apple's R&D budget is "...an estimated \$680 million this year." This budget will generate a flood of new products and standards in the next two years. It is hard to believe Sculley would want to leave Apple before these products are seen. However, if he stays, he will be forced to witness first hand the business of reworking Apple.

While rumors and changing predictions have placed Apple layoffs at anywhere from 900 to 3,000 employees, the latest figure is, according to a syndicated article by John Markoff, 16% of its work force, or approximately 2,500 people. The remaining employees will face a company-wide pay freeze to continue indefinitely. However, all executives from the vice president level up will take a 5% pay cut.

Commodore

It has been the subject on almost every Amiga electronic bulletin board in the country—Commodore layoffs, Commodore losses, Commodore stock prices, and basically Commodore fear. They question CBM's ability to attract new developers and software to the Amiga platform. Even as the Amiga is becoming hotter than ever in video with the introduction of the Video Toaster 4000 and their competition OpalVision (please see the CES and WOCA articles in this month's issue), there is doubt about the company.

Some of this comes from the announced losses by Commodore of which a good portion were paper losses from inventory "downsizing." Some of this comes from the way Commodore stock has been bumping along at the bottom at around \$3 to \$3.875 per share. Probably the best thing for Commodore would be for all of us to ignore this, but it isn't that easy. Sometimes we need to face the facts to be sure we know what they mean.

In the "Roomers" column this month, The Bandito takes a hard swipe at Commodore. This is probably the best analyzed, researched, and composed article the Bandito has ever submitted. It had to be, because it is the most controversial.

When the Bandito's column arrived, we went to work. I had no desire to publish the piece without attempting to check the sources.

We pulled material from CBM's annual report as well as their quarterly updates. I then phoned a few of the large stock brokerage firms and discussed CBM's current position and possible future. While we were never able to track down the reasons for all of the Bandito's comments, almost every fact and figure in the article has been reviewed and verified.

It is another article everyone interested in Commodore, even Apple, should read. By reading both, Commodore watchers may get an idea about some of CBM's problems.

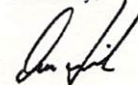
The Differences

While Apple management faced its problems and offered solutions, Commodore International remains silent. A highly paid (by Apple standards) executive turned over the reigns of power when he felt he was no longer effective. He did not scrap the people who had followed his orders; he took responsibility.

The Amiga is a great computer with powerful technology. It is time Commodore faced its responsibilities and did what it can to make this platform all it was meant to be. Anyone with any other agenda should be at least as honest as Mr. Sculley.

Corporate salaries are paid for performance. Stockholders buy stock as an investment. Computer users place their trust and expectations into a computer company every time they purchase a piece of hardware. Developers create software for platforms they believe to be superior and profitable. People join companies to experience the growth potential these companies create. Anything less than a full dedication to these people's dreams and expectations is unacceptable. The high, powerful, corporate titles at an international level are positions of trust. When that stewardship is no longer applied, it is time to say good-bye.

Sincerely,



Don Hicks
Managing Editor

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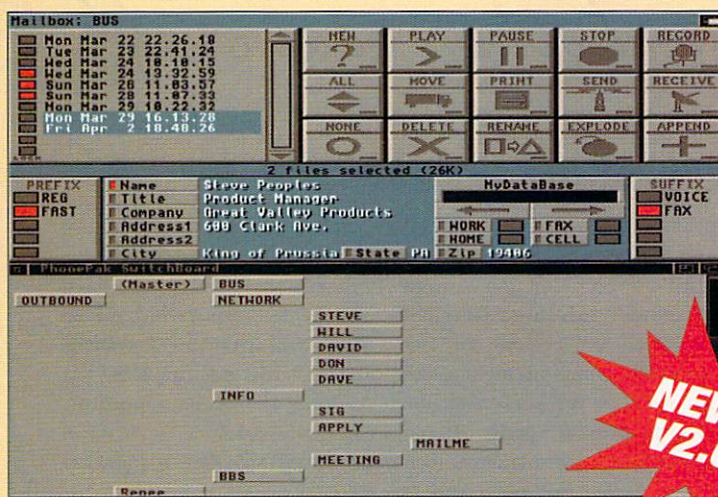


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and other neat stuff

1942

The 1942 color multiscan monitor provides analog RGB (15.75KHz) and VGA(31.5KHz) scan modes with support for the Amiga computer's Advanced Graphics Architecture™ custom chip set requesters. A built-in amplifier and left and right speakers enable the 1942 to provide quality stereo sound. The 14-inch monitor screen has a .28mm dot pitch and is equipped with a tilt and swivel base. *Commodore Business Machines, Inc., 1200 Wilson Dr., PA 19380, (215) 431-9100. Inquiry #200*

A4091

The A 4091 is a full-size autobooting controller card with an integrated 3.5-inch drive mount. The card fits into the Amiga's Zorro III slot. Compatible with SCSI-1 devices, the card also includes internal and external SCSI-2 connectors supporting up to seven devices. The fast SCSI-2 controller provides transfer rates of up to 10MB per second. Users of the A4091 in an Amiga 3000 or 4000 system requires a Buster chip revision K, AmigaDOS™ 2.04 or higher, and supported processor cards. *Commodore Business Machines, Inc., 1200 Wilson Dr., PA 19380, (215) 431-9100. Inquiry #201*

AmiVR1

AmiVR, the video-based 3D Virtual Reality viewing system, gives you a video interface and liquid crystal shutter glasses for viewing field-sequential 3-D stereoscopic video. You can connect the system to the video output of your Amiga for full color stereoscopic 3-D Amiga graphics. The AmiVR

synchronizes the glasses directly from the Amiga video signal's sync. For the A3000 and A4000 you'll need the A520 video adapter. Other model Amigas all have NTSC video output which can be used direct with AmiVR systems and the NTSC video input of your Amiga 1084-type monitor. *MegageM, 1903 Adria, Santa Maria, CA 93454, (805) 349-1104. Inquiry #202*

Amiga Online Reference Manual v2

Area52 is proud to announce the release of a new AmigaGuide based help and reference system, designed for both novice Amiga users and experienced Amiga users. Using charts, reference tables, and indexes, over 350 pages of text is provided on a single floppy disk for use in learning about the Amiga system or referencing valuable indexes containing help using AmigaDOS commands, the AmigaShell, the Workbench, and general aspects of the computer. *Area52 Software, 107 River Park Drive, Liverpool, NY 13090. Inquiry #203*

Benchmark Modula-2 Assistant

Benchmark Modula-2 Assistant, the first new Armadillo Computing release, is a hypertext-like tool which provides an intelligent, automatically-updated index of all Benchmark and user-created definition modules. It also contains an automatic "make" facility and numerous utilities to simplify Modula-2 programming. *Armadillo Computing, 525 Marymount Drive, Austin, TX 78723, (512) 926-0360.*

Inquiry #204

The BreadBoard™

The BreadBoard (\$398) is equipped with five video amplifiers—three with delay lines. One amplifier is dedicated as a Program Output. Another can be strapped as Program or Preview. The three delay channels can be strapped for Inputs 1-4, KeySourceSignal (Alpha Channel) or Key Insert Video Signal. The BreadBoard cables into the Video toaster's feature connectors—the six external BNC connectors are not utilized. The BreadBoard mounts inside the Amiga in one of the PC expansion slots. Power is supplied by the PC bus. No bridge board is required. Delay lines can be strapped for a wide range of delay and adjusted for unity gain. All outputs are rear-mounted BNC's. Dual BreadBoard configuration achieves maximum flexibility: four Delayed Inputs, two Delayed Key Signals, and four Program/Preview Outputs. *PreVue Technologies, P.O. Box 2617, Grass Valley, CA 95945, (800) 356-8863. Inquiry #205*

Campaign II

The system has been updated to include all the post-war vehicles—over 100 new 3-D shapes from Abrams to T72s! All of the modern weapon systems such as guided missiles, rockets, homing missiles, laser rangefinders, gun stabilizers and night sights have been added. Animated infantry can be deployed from personnel carriers into the battlefield. And now, not only can you drive all of the vehicles in an improved 3-D environment, but you can even fly the helicopters too!

But the real strength of Campaign II is in its strategy. After long consultations with military strategists, Campaign II has emerged as the most comprehensive simulation, not just for warfare, but of the whole strategy of running an army as viewed from all levels. Available October 1993. *ReadySoft Incorporated, 30 Wertheim Court, Ste. 2, Richmond Hill, Ontario, Canada L4B 1B9, (416) 731-4175. Inquiry #222*

DKB 1202

Realize the full potential of your A1200 with the DKB 1202 expansion board. The DKB 1202 uses the Motorola 68881 math coprocessor clocked at 16MHz, speeding up math-intensive operations, a must-have feature if you do any morphing or animation, image manipulation, or ray tracing. Handles up to 8MB of 32-bit memory, has built-in real-time clock, and fits into trap door for easy installation. *DKB, 50240 West Pontiac Trail, Wixom, MI 48393, (313) 960-8751. Inquiry #206*

Dreamweb

In a city in the future, one force controls the lives of people, the Dreamweb. Powers of good and evil wrestle in the subconscious of every person, a sort of virtual world of dreams. But, all is not well in the Dreamweb. Evil is now so strong, it threatens to wipe out good forever and control the Dreamweb for eternity. The guardians of the Web have summoned one person to break the control of evil and fight for the good in this world. One person against a power so strong you cannot begin to comprehend it outside your dreams. That one person is Ryan. Ryan is you! Available November 1993. *ReadySoft Incorporated, 30 Wertheim Court, Ste. 2, Richmond Hill, Ontario, Canada L4B 1B9, (416) 731-4175. Inquiry #223*

ENLAN-DFS

Interworks introduces its Ethernet-based Distributed File System for the Amiga. This product allows complete sharing of devices, directories, and peripherals, turning your Amiga system into a networked workgroup environment. ENLAN-DFS provides the software you need to interconnect a workgroup of Amiga computers. The Commodore A2065 Ethernet adapter provides the hardware interface. ENLAN-DFS permits transparent disk and file sharing, printing, and even centralized file backup. *Interworks, 43191 Camino Casillas, Ste. B2469, Temecula, CA 92592, (909) 699-8120. Inquiry #207*

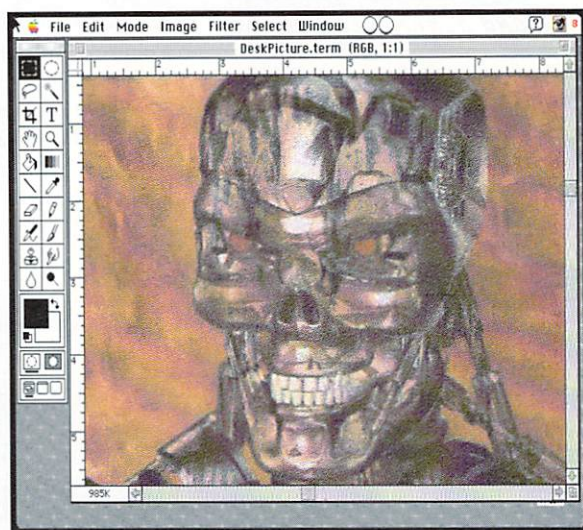
The World's First Multi-Platform Emulation System!

EMPLANT™

EMPLANT is a hardware/software product that is designed to allow the emulation of virtually any computer using the Amiga. A simple software driver and ROM(s) from the computer to be emulated are all that is required! Custom programmable logic allows the EMPLANT hardware to actually become the exact hardware of the computer it is emulating. Multiple emulation modules can be run at the same time using a single EMPLANT board!

Full color MAC IIx emulation!

Support for up to 16 colors is provided for non-AGA machines. A4000 owners can use a full 256 colors! Support for the Retina Video board allows you to have a **16 million color** Macintosh! Utilities Unlimited, Inc. is working closely with other video board manufacturers to provide support for their video products, such as: The Resolver, Firecracker, EGS, Domino, Rainbow II/III, Merlin and many more! Support for AMAX formatted floppys and hard drive partitions, MAC hard drives, SyQuest cartridges, AmigaDOS devices (RAD, VD0, DH0, etc.), and MAC floppys (requires SYBIL hardware, sold separately) is provided with easy to use setup menus.



EMPLANT running Adobe Photoshop in full color!

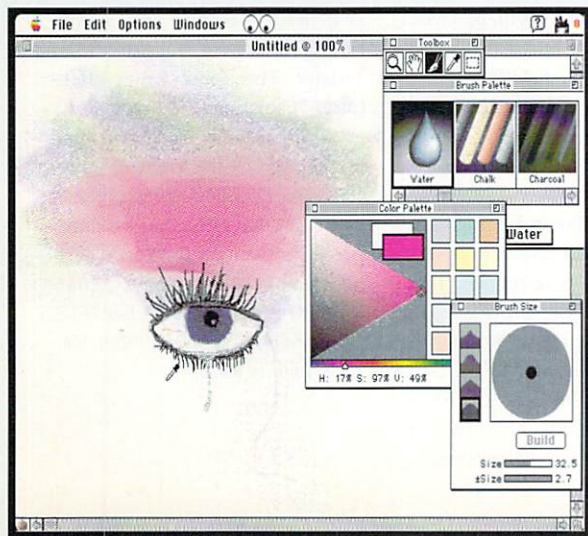
They said it could never be done ...

Like ALL of the emulation modules that will be released for use with the EMPLANT hardware, the MAC IIx emulation module **MULTITASKS** with the Amiga's operating system! You can simply pull down or flip screens and get back to the Amiga side! ...and the MAC stays running at full speed! Speaking of speed...A 25Mhz A3000 runs the MAC IIx emulation exactly twice as fast as a real MAC IIx! Just imagine the speed of an '040 Amiga! The emulation runs ALL known MAC programs, and in FULL color, (if the program supports color)...and all while **MULTITASKING** with the Amiga!! (MAC IIx emulation module *requires* an accelerated Amiga - 68020 or 68030/68040 w/MMU) and 256K MAC ROMs (not provided). Not all emulation modules will require accelerated machines. Four megabytes of memory is recommended for use with System 7.

Future emulations...

Since the EMPLANT's hardware is so versatile, a completely new and different computer can be emulated by just changing the emulation software patch and the ROM(s). MAC QUADRA, Mega ST, IBM AT (386/486), C64/128, Atari 400/800, and even game machine (Genesis/SNES) emulators are planned in the near future.

Utilities Unlimited, Inc. offers four different EMPLANT versions: BASIC EMPLANT system, OPTION 'A' - BASIC EMPLANT system with dual high speed serial ports/AppleTalk support, OPTION 'B' - BASIC EMPLANT system with high speed SCSI interface, and DELUXE - BASIC EMPLANT system with both dual high speed serial ports/AppleTalk support AND high speed SCSI interface.



EMPLANT running Fractal Design Painter in full color!

BASIC EMPLANT system - \$279.95
OPTION 'A' EMPLANT system - \$349.95
OPTION 'B' EMPLANT system - \$349.95
DELUXE EMPLANT - \$399.95
SYBIL Hardware - \$99.95

Please add \$10.00 for shipping and handling (all orders are shipped via UPS Blue label). C.O.D. Fee - \$5.00.
All EMPLANT packages described above come with MAC IIx emulation software and necessary device drivers. ROM(s) are not shipped with this product. Sources available upon request.
Dealer inquiries welcome! Foreign dealers welcome!

Utilities Unlimited, Inc.

1641 McCulloch Blvd. Suite #25-124

Lake Havasu City, AZ 86403

(602) 680-9004 Orders only (602) 453-6407 FAX

(602) 680-9006 Tech calls (602) 453-9767 BBS

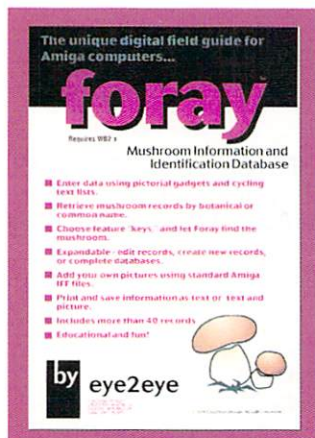
Circle 115 on Reader Service card.

NEW PRODUCTS

and other neat stuff

Foray

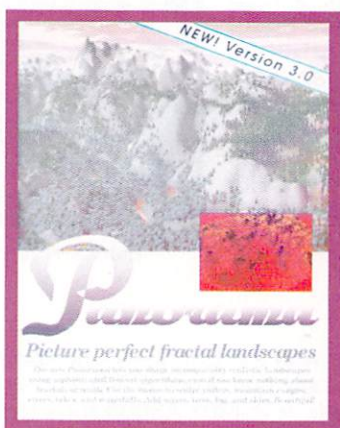
Foray (\$55) is a pictorial database for mushroom identification and information. Foray is designed to be easy-to-use. Even someone who has never picked a wild mushroom and doesn't intend to, can enjoy Foray simply as a pictorial information source. The experienced mushroom hunter can modify the included information, add new records, or create entire new databases. Foray is designed to assist the serious mycologist, offering the matrix for an extensive multi-genus database. Records may be retrieved by Genus, Genus.species, common name, or by selecting feature keys and initializing a search. *eye2eye design*, 206 6th Ave. West, Seattle, WA 98119, (206) 281-9165. *Inquiry #208*



Panorama™ Version 3.0

Push•Button Publishing has shipped Panorama Version 3.0, a program for the creation, manipulation, and rendering of fractal landscapes for the Amiga. The program incorporates the latest technology in fractal landscape algorithms, making pictures of astounding beauty and realism from mathematical calculations.

No knowledge of math is required to use Panorama. The program's automatic, preset selections for all of its many parameters are configured to produce nice pictures the first time. From there, users can customize any of the vast number of possibilities to produce custom effects, refine the realism, add trees, and sculpt the fractal math algorithms that perform the magic. *Inventure*, 114 Market St., Morrison, CO 80465, (303) 697-5270. *Inquiry #210*



PlaqueGrounds

PlaqueGrounds (\$99.95) is a new package consisting of 104 IFF 24-bit, high-quality textured plaques to use with 24-bit and AGA paint programs. These NTSC and PAL compatible background plaques are dimensionally rendered in eight different textures, four styles, and various sizes. PlaqueGrounds requires 4MB of hard drive storage (JPEG). *Kara Computer Graphics*, 2554 Lincoln Blvd., Ste. 1010, Marina Del Rey, CA 90291, (310) 578-9177. *Inquiry #211*

SCSI Expander

The ATTO SCSI Expander eliminates the limitation of seven devices on a SCSI bus by mapping each SCSI bus ID to seven additional devices. This increases the maximum number of SCSI devices to 49. The ATTO Expander manages transactions and device mappings between two independent SCSI buses through the use of Logical Unit Numbers. Operation is completely transparent to the host. Special options allow high-

level functions such as disk stripping, disk mirroring, and disk spanning to be added to any existing system without drivers or system changes. *ATTO Technology Inc.*, Baird Research Park, 1576 Sweet Home Rd., Amherst, NY 14228-2170, (716) 688-4259. *Inquiry #212*

SCSI-TV

The SCSI-TV is a SCSI controller for the Commodore CDTV multimedia player. It installs easily in the expansion port accessible at the rear of the CDTV, without opening the case. SCSI-TV supports the AUTOCONFIG™ and Autobooting with Rigid Disk Block support for hard drives. SCSI-direct protocol allows backup programs to use SCSI tape drives. True DMA provides fast data transfer and low CPU overhead. The SCSI-TV interface allows the CDTV to connect to virtually any SCSI device. Full technical support is available directly from AmiTriX. *AmiTriX Development*, 7011 93 Ave., Edmonton, Alberta, T6B 0W7, Canada, (403) 425-1746. *Inquiry #213*

Simkat Ethnic Fonts

Simkat Ethnic fonts (\$100) offer a large variety of Semitic and non-Latin fonts in Assyrian (Syriac), Arabic, Persian (Farsi), Afghani, Ottoman (Turkish), and more. These fonts are geared towards Amiga multi-media applications, they come in four different packages. Package(s): [T] for Video Toaster CG, [P] for Deluxe Paint, [R] for Rashumon WP, [V] for General Video applications. Each package comes with an 80-page user manual with keymaps, layout, and 47 key stickers. *L.C.P.S., Inc.*, P.O. Box 2015, Schiller Park, IL 60176, (708) 678-7183. *Inquiry #224*

SupraTurbo 28

The new SupraTurbo 28 accelerates Amiga 500 and Amiga 2000 computers from 7MHz to 28MHz, installs easily with no need to replace the existing processor, and maintains Supra's reputation for price/performance leadership with its suggested price of \$199.95. The SupraTurbo 28 is fully compatible with the 68000 processor—

this enables it to run with most software written for the 68000 processor. However, there may still be cases where the user wants or needs to slow the computer back to 7MHz for certain applications. To meet these needs, the SupraTurbo 28 has both an external on/off switch as well as a software-driven speed control. *Supra Corporation*, 7101 Supra Drive SW, Albany, OR 97321, (503) 967-2400. *Inquiry #214*

Syndesis 3D-ROM

Syndesis Corporation announces the release of the Syndesis 3D-ROM (\$199.95), a CD-ROM containing more than 500 freely distributable 3D models. The 3D-ROM is a spectacular demonstration of InterChange Plus, Syndesis's 3-D file format translation system. The 3D-ROM includes a cross-referenced catalog of the objects, including background information about the translation process and how the objects can be used in many 3-D programs. The Syndesis 3D-ROM also contains demo objects from 3-D modeling companies. The disc also contains more than 400 tileable, wrappable bitmap image texture maps for coloring 3-D models. *Syndesis Corporation*, P.O. Box 65, 235 South Main St., Jefferson, WI 53549, (414) 674-5200. *Inquiry #215*

The Toast Timer™

The Toast Timer (\$298) solves one of the more troublesome problems when integrating the Video Toaster into a large video system. With the Toast Timer, the timing reference of the downstream switcher can be also used as the timing reference for the Video Toaster. The Toast Timer effectively "back times" the switcher's genlock reference so that it also can be used by the Video Toaster. This is particularly useful for those switchers that either have no timing adjustments or produce a non-adjustable Black Burst signal. *PreVue Technologies*, P.O. Box 2617, Grass Valley, CA 95945, (800) 356-8863. *Inquiry #216*

The Toaster System Integrator.

T-Rexx Professional is a highly integrated ARExx script generation environment with powerful tools specifically designed for the NewTek Video Toaster. T-Rexx can also automate the functions of 11 other important products, and, because it is completely user configurable, you can add support for the products of your choice.

Benefits

Create sophisticated scripts without any knowledge of ARExx. You simply point and click. T-Rexx even displays your scripts in plain English!

All T-Rexx tools are connected together creating a fully integrated system. You need learn only one user interface to master every aspect of T-Rexx Professional.

You can quickly and easily manage large quantities of Toaster Framestore images. Convert Framestores to and from RGB (in full color and fidelity) without requiring a Toaster.

You can create your own ActionFX and OrganicFX to produce custom results for your demanding clients. Using T-Rexx's special effects processing, dozens of new FX can be created from a single source.

You can create and modify Toaster projects creating exactly the configuration which best meets your needs.

Develop scripts in a fraction of the time it used to take using T-Rexx's unique Real Time Mode. You can test your scripts as you write them, alerting you to any mistakes instantly.

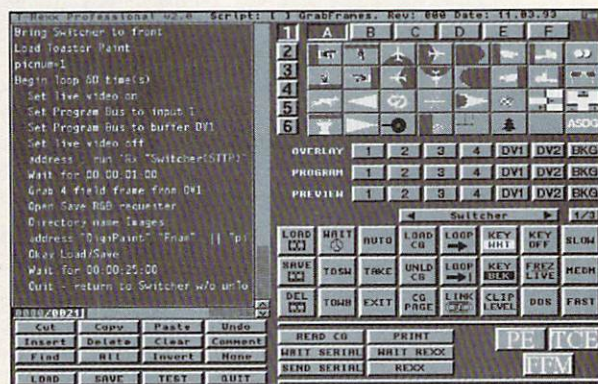
Using one consistent, easy-to-learn user interface, you can control any program that is ARExx compatible or any device that can

accept commands via a serial or parallel port. *Your entire studio, not just your Toaster, can be controlled by T-Rexx giving you more time for producing results instead of hunting for solutions.*

Includes support for the following products: AmiLink, Art Department Professional, BCD-2000A, DQ-Taco, MediaPhile, MorphPlus, PC-VCR, Personal SFC II, Personal TBC III, Pixel 3D, SunRize Studio 16 and VISCA.

T-Rexx allows you to create interactive or automated multimedia presentations by linking the Video Toaster to other hardware and software products. T-Rexx's ability to be synchronized to events from the GPI, serial port, parallel port, keyboard, ARExx or timer means you've got the widest array of options available for your creative use. T-Rexx can even **automate the recording of your finished presentation** (including audio) onto video tape or single frame recorders.

T-Rexx provides powerful batch processing tools which save you time and disk space. Process images as they're produced automatically, without having to store intermediate results.



Your script is shown in plain English on T-Rexx Professional's main screen.



Framestores can be converted to/from RGB, previewed and organized using FramestoreFM.

T-REXX

Professional

T-Rexx helps you get the most of your system investment because an integrated system is greater than the sum of its parts. **T-Rexx Professional is the Toaster System Integrator!**

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Circle 102 on Reader Service card.

ASDG

925 Stewart Street Madison, WI 53713
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T-Rexx Professional is backed by ASDG, a solid company providing innovative products and quality customer support since 1986.

NEW PRODUCTS

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•Other Neat Stuff•

Amiga G-Lock Greatly Enhanced

GVP announces the completion of version 1.16 of the G-Lock control software. This major software update delivers yet more power and versatility to GVP's popular Amiga genlock. Volume 1.16 boasts the following enhancements: Expanded control options including support for the Amiga's parallel port; Improved operation and synchronization with all VCRs during rewind, fast-forward, and pause; Clean switching between two synchronized composite video sources; Automatic software startup capability for use with

kiosks and other presentational applications; Developer support with extended documentation on disk. The update is now available on the GVP BBS at (215) 337-8770. Great Valley Products, 600 Clark Avenue, King of Prussia, PA 19406, (215) 337-8770. Inquiry #217

Armadillo Computing

Armadillo Computing is proud to announce its acquisition of Avant-Garde Software, publisher of Benchmark Modula-2, Benchmark Source Level Debugger, Benchmark add-on libraries, and a book on Amiga programming. *Armadillo Computing*, 5225 Marymount Drive, Austin, TX 78723, (512) 926-0360. Inquiry #218

Digital•Collage Now 24-Bit

Digital•Collage now comes in two Amiga formats: IFF and IFF24. For those users with standard Amiga graphic modes, Digital•Collage offers HAM texture tiles and 16-color overscan backdrops every month, as well as motion clips that directly load into DeluxePaint's "Move" requester. For users with 24-bit boards, the new

Digital•Collage24 features the same 10 texture tiles and five backdrops contained in the standard graphics version, but the images are JPEG compressed in their original 24-bit color. *DRC Sequential Graphics*, 57 East 400 North #9, Provo, UT 84606-2987, (801) 373-9579. Inquiry #219

Migraph ColorBurst

Migraph, Inc. is shipping the Migraph ColorBurst™, the first color hand scanner for Amiga systems in the United States. The Migraph ColorBurst has these powerful features: Five scanning modes: Super Color Mode, Greyscale, Color Dither Halftone, and monochrome/line art; Six scanning resolutions: 50-400 dpi based on the currently selected scanning mode; Migraph ColorKit™ software scans, displays, and saves color, greyscale, and monochrome images in IFF file format, including 24-bit IFF; 64 true greyscale levels can be scanned at 400 dpi; Compatible with Workbench v1.3, v2.x, and v3; Supports the new AGA chipset; and more. *Migraph, Inc.*, 32700 Pa-

cific Highway S., Ste. 14, Federal Way, WA 98003, (206) 838-4677. Inquiry #209

TRSL Relocates

Technical Resource Systems Laboratory, makers of Charts & Graphs V 3.0, has relocated from Las Vegas, Nevada to Chester, Pennsylvania. *Technical Resource Systems Laboratory*, 729 Engle St., Chester, PA 19013, (215) 497-2845. Inquiry #221

Thunder Ridge Distributes TSSnet

TSSnet (\$395), which was formerly a Syndesis product, is now being developed and distributed by Thunder Ridge. TSSnet is an implementation of the DECnet network protocol for the Amiga. *Thunder Ridge, Inc.*, N9353 Benson Rd, Brooklyn, WI 53521, (608) 455-1039. Inquiry #220

New Products and Other Neat Stuff is compiled by Elizabeth Harris.

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Model	CDN\$	US\$															
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SVGA	\$379	\$299															
1942 S	\$549	\$439															
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- * "Power-up" prices only available to present owners of CBM computers. Ask for details.

Circle 113 on Reader Service card.

REVIEWS

Word Construction Set Educational Software for the Amiga

by Rick Manasa

Word Construction Set is a group of related programs designed to help the primary grade through high school student develop word recognition and vocabulary skills in a fun setting. Students are asked to put words together by selecting beginnings, middles, and ends of words displayed on construction blocks. The Amiga says the word in a sentence while displaying a picture describing the word or activity. You are asked to fill in the blank word in the sentence by selecting the different building blocks that make up the word from the wall of word segments on the screen. *Word Construction Set* combines phonetics with word pattern recognition to give the student a set of skills for pronouncing unfamiliar words that contain familiar components.

Follows the Rules

Word Construction Set follows the reading and spelling skill guidelines of the English National curriculum, the Australian and New Zealand English Language re-

quirements, and the American Educational Institute requirements for the Teaching of English. It reveals its British roots but those of us who speak American shouldn't have any trouble. It also lets you make up whimsical and impossible words like "blintlet" and "sluckish." The student can try these

words out as well. "You had the blintlet slice of pie" might not mean much to me or you immediately, but with the help of an inventive seven-year-old, it will make sense eventually.

Word Construction Set is not copy protected, comes on three disks, and is designed to be run from the floppies. If you're working with one of the newer Amigas, you may have to copy the narrator device from an earlier version of the operating system, as *Word Construction Set* requires it to pronounce the words. I did manage to install it on my hard drive, but I had to assign the disk names to the appropriate location and copy the School font to my system Fonts directory. None of



Build words from the consonant wall.

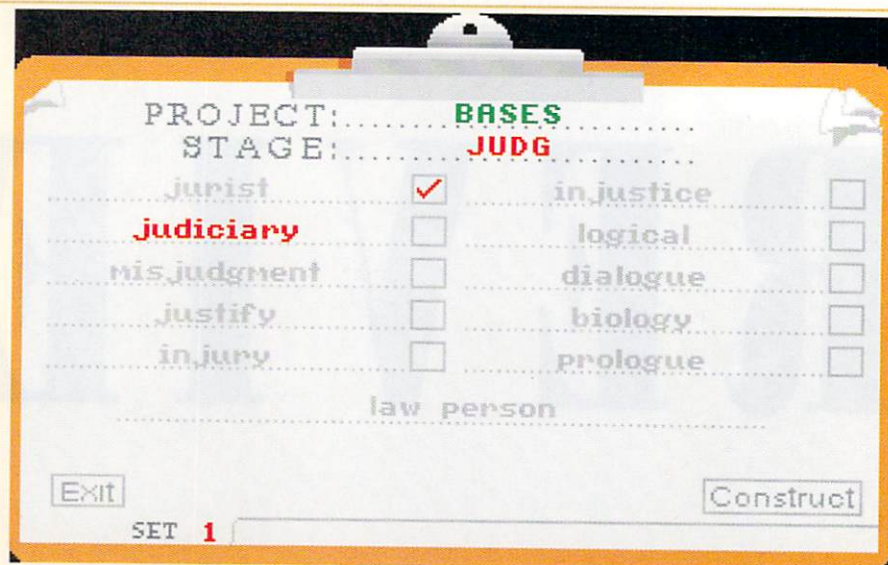
REVIEWS

Below: Word Construction Set main screen.

Right: The Project Screen, where all the words to be constructed are displayed.

this is documented in the manual, however, so you're on your own if you need to set up Word Construction Set in other than the default manner. Once installed, Word Construction Set multitasks nicely, with only a winch sprite poking through to my Workbench screen from the program. While there is no listing of system requirements, I'd guess that Word Construction Set is designed to run on the basic A500 system. Most products from Down Under or Europe seem geared toward this configuration.

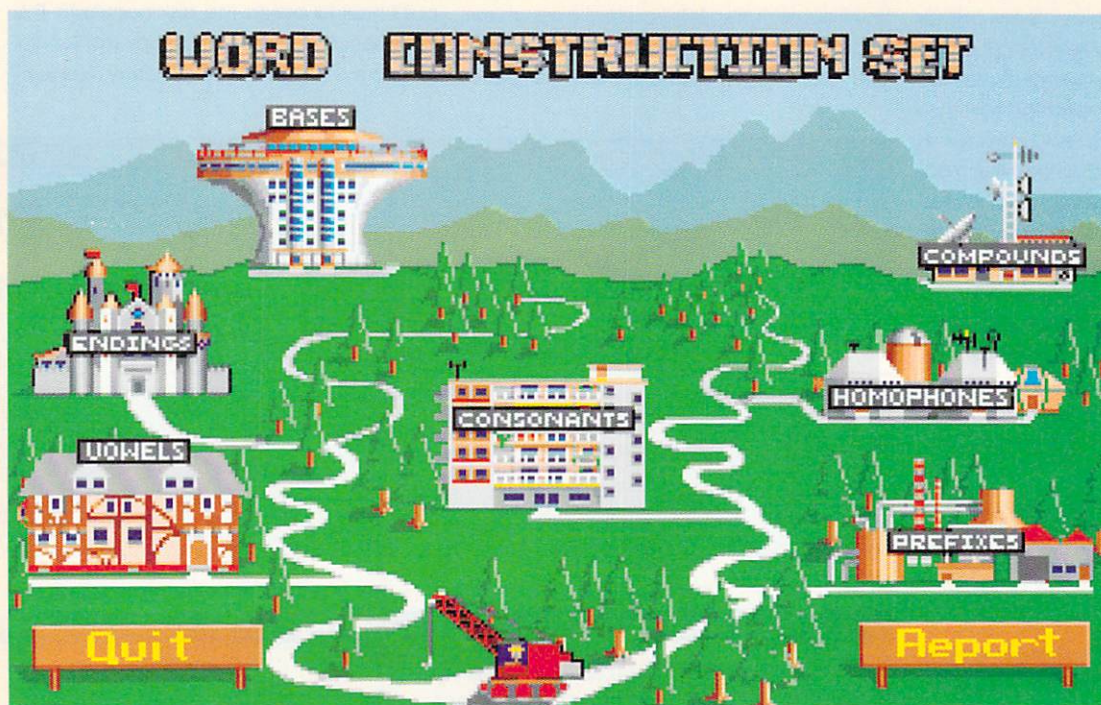
Word Construction Set consists of seven different programs designed to help the student understand how words are made from seven different perspectives. Each one of the seven buildings focuses on a different aspect of building a word. The main screen shows a landscape with seven building sites. Once selected, the student is presented with a building framework that he must fill in with the building blocks he will create. When he selects Construct, he's taken to a Project screen, where all the words he'll have to put together are listed. The screen also displays a picture describing the word or activity. If you click on the word, the program will pronounce it for you. This gives you a good idea of the focus and the difficulty of the selected lesson.



Hard Hats Not Required

Once you've checked out the Project screen, you're ready to put on your hard hat and start building. The Main Menu lets you select from one of the seven building sites. The Consonant Condominiums concentrates on consonants in single and dual syllable patterns. Vowel Village covers long vowels, diphthongs, silent 'e' endings and how 'r's affect the way a word is pronounced. Castle Endings deals with how words end. Plurals that end with 's' or 'es', superlatives (-er or -est), and the differences between -tion and -sion are covered. CTV, the Compound TV Studio, goes over compound words. These are words

that are made up of two complete words, like doormat and moonlight. The Homophone Observatory tackles the difficult concept of homonyms—words that look or sound alike, but have different meanings (pair and pear, there and their, etc.). The Prefix Factory divides prefixes into different meaning groups, such as Quantity (eg. bicycle and tricycle) and Not (eg. impossible and irrational). Finally, the Base Hotel hosts words with a Greek or Latin root. Words such as "inanimate" and "unanimous" contain the Latin root "anim," for example. I found many of the combination roots fascinating. Knowing that "gradient" is derived from two root words meaning



"steps" and "place," or that "deceptive" comes from words meaning "down take in" enhances my understanding and use of these words. Each word is divided into logical patterns and placed on the wall, where you must select and recombine the syllables into words based on the prompts provided by the Amiga. The left blocks contain the beginnings of a word (br, ch, spl, etc.) and the right blocks hold the endings of words (et, ight, ong, etc.).

the students progress and even print out a nifty certificate to document his or her accomplishments. You can erase the word block with the Erase icon and all the records can be wiped clean with the Rebuild feature.

Comments and Concerns

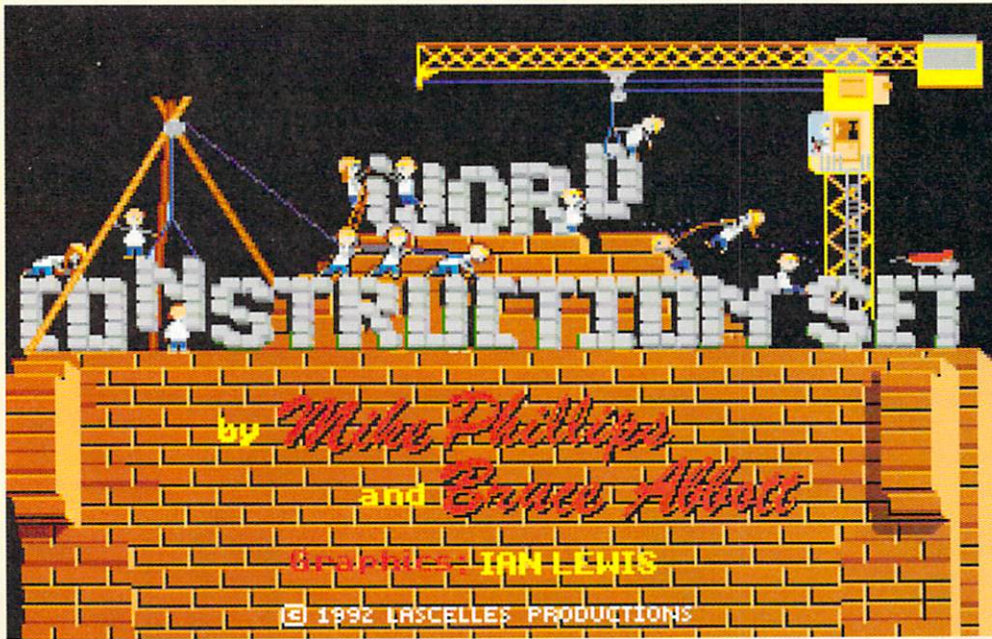
Word Construction Set covers the material it intends to cover and it does so in a colorful and thorough fashion. It has

should be stated somewhere. There are definite jumps in skill level required to get through the whole program. The program virtually requires an adult or older child on hand. While there is nothing wrong with this arrangement, it limits the programs usefulness in a primary grades classroom setting.

It's quite possible for a child—or an adult for that matter—to be able to put the pieces of the word puzzle together without

having the slightest idea of what the word means. This is especially true in the Base Hotel and Prefix Factory. It's hard to endorse wholeheartedly a program that seems to divorce word pronunciation from word meaning and understanding. Simple definitions, to accompany the use of the word in a sentence, would go along way toward addressing this concern. It's also hard to follow the logic of putting such words as "jurist" and "dialogue" in the same Project—in this case, words that have "judg" as their root. Again, some simple explanation of how "dialogue," "logical," and "biology" all have "judg" as their root word would be appreciated.

There is no facility in the Word Construction Set for creating your own list of words. This is not a bad thing, but it makes you wonder why the authors didn't use a digitized voice for pronouncing the words. The authors of *PhunnyPhonemes* decided to use the narrator.device because they wanted to make it possible for parents and teachers to create their own word lists. There are directions on how to do this in the *PhunnyPhonemes* manual. While it is possible to do this in Word Construction Set, it is not documented, nor is it easy. Under these circumstances, why not go for the clearest pronunciation whenever possible and at least digitize the word and sentence list? The narrator.device has been left behind in the latest version of Workbench. While this won't be an issue for a while, it will get harder, not easier, to find Amigas capable of running programs like Word Construction Set (a questionable decision on Commodore's part, at best). Though not stated anywhere, one has to believe



Sometimes there are three blocks for a prefix, base of the word, and a suffix. The center block is where the word sections are joined to make a complete word. The sentence strip displays the prompt minus the word you must supply. Sometimes the prompts include a picture and a sentence, sometimes a definition or meaning. Either way, there's sufficient help for the old narrator.device. The words are highlighted as the sentence is spoken. The List icon takes you back to the Project screen, so you can see and hear how a word is supposed to look and sound. You can also select a different list of words, if another list is available for that project. Clicking on the Sound icon will pronounce the requested word for you out of context. The Amiga will pronounce the word you've built, which may not be the same as the requested word, when you click on it. There is plenty of this type of feedback to help keep the student moving through the lessons. The Reports feature will keep track of

some technical and conceptual glitches, however, that should be pointed out. The bitmap graphics are a bit chunky. This makes it hard to decipher the smaller pictures. There is a certain amount of necessary disk swapping, which always seems to be asking for trouble with the younger set. Some schools set up their classroom computers in a host-file server type system. The inability to easily install the program on a hard drive will be a nuisance for those used to this type of arrangement.

The conceptual and design problems are a larger concern. The manual is well laid out, but sparse. On its own, the manual does not provide the teacher or supervising adult with enough background and support information (for example, the meaning of diagraph) to develop a lesson based on the program components of the Word Construction Set. Perhaps it is intended as a supplement to a standardized teacher's resource that goes into the covered areas more thoroughly. If so, this

that an adult's participation is not only encouraged but mandatory to help decipher the Amiga's pronunciation.

My daughter Morgan and her teacher gave it the once-over from the non-adult point of view. They both thought the presentation was best suited for the 6-7 year old set, even though some of the content was more appropriate to an older child or adult. The game got boring after about 10-15 minutes for my right-brained 12-year-old, and didn't have a large enough payoff to complete a section, in her view. Her teacher thought that someone more into puzzles and erector sets could really get hooked on the construction metaphor, and might never leave the game at all.

Conclusions

The Word Construction Set would be a good addition to your educational software arsenal, regardless of your grade level. Combined with other such programs and a sound curriculum, it can play a significant part in helping the beginning student navigate the complex waters of the English language and give the older student something to sink his teeth into. The colorful screens and game/puzzle approach should help retain a child's interest far better than rote learning and memorization drills. Without adult supervision, however, the Word Construction Set could easily discourage your younger child when she moves into its more difficult sections. If you stay with your child, the Word Construction Set can be a valuable tool in her education.

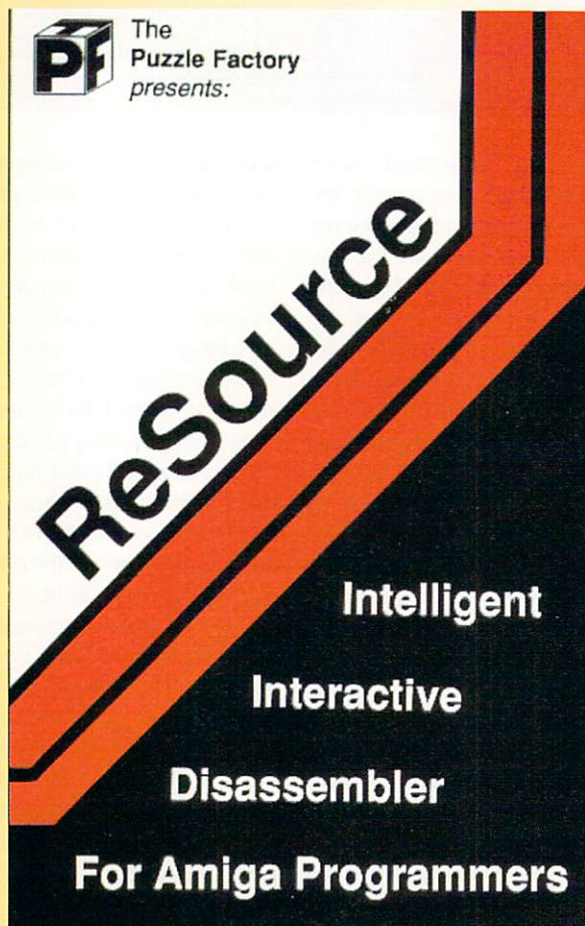
Word Construction Set
Lascelles Productions Ltd.
401 Lascelles St.
P.O. Box 959
Hastings New Zealand
Phone Number: 0064 6 878 9652
Inquiry #227

ReSource Disassembler

by William P. Nee

Are you a natural snoop? Curious about all those short programs written in C? Ever wonder if you could examine the code that makes up a program? Now, with the Puzzle Factory's great new version of *ReSource*, the capability to disassemble code is within your grasp.

A warning though, *ReSource* will not teach you the basics of assembly language. You need a foundation and then let *ReSource* build onto it. To recognize some of the code you must be familiar with opening libraries, the structure for screens,



windows, menus and gadgets; you need to be able to recognize an Intuition message when you see one and tell an IDCMP class flag from a window flag. The AC's *TECH* magazine has a good series on assembly language for beginners starting in V2.1.

ReSource comes in a sturdy box with a 96-page manual and three disks. Disk 1 contains mainly the libraries and an install program. Disk 2 contains all the .fd files (what values go into which register), amiga.lib, and all the structure files. Disk 3 has the docs and tutorials. There are seven sections in the manual covering everything from an overview to advanced topics. After reading the introduction I had to try installing ReSource on my hard disk. The manual says ReSource will work on any Amiga from the 500 to 3000 and you do need version 1.3 or higher along with a minimum of 1MB of storage RAM—more for larger files. The installer program is very complete and I suggest you read it before running it. There is a trial mode you can run first, a feature I've never seen before. I installed every file even though some aren't needed initially; I figured it's easier to delete files than to go back and try to add some.

Once ReSource was up and running it was time to look at the menus. At first there seem to be an overwhelming number of them but as you work with the program the more frequently used items are easy to find. There is an excellent feature called Online Help. Just press the HELP key and then select any menu item and a description of that function with all related menu items will appear; some descriptions are a few lines while others are several pages. And, if that isn't enough, there's Hyperhelp. Several words or phrases in the help text are lightly underlined. By using the arrow keys you can highlight any of these phrases and bring up further text explaining the specific phrase. And that text may contain underlined text which can bring up more text, etc. The manual says that you can go 256 levels into the text! I'm not that hyper, but I did find myself 5 levels down. Just keep using the backspace to return to the program level.

There is a short tutorial that gets you started in disassembling a simple program. I followed it through step by step and had a completed .ASM file in about 10 minutes. There is an almost magic menu item in PROJECT called disassemble. This function will review the entire code, try to make ASCII text, assign text names to labels, separate code from data—well, you get the

idea. Once the big picture is completed it's up to you to start filling in the pieces.

Since the EXEC library is always at location 4, you can tell when it's loaded into an address register. Then, when you see an offset for that address bring up the S2 menu, EXEC library; this will automatically convert that offset to its function name - OpenLibrary, GetMsg, CloseLibrary, etc. The ASCII strings for the various library names will have already been disassembled so you can read the name and know which ones are being opened. Since d0 contains the library address you can label addresses DOSBASE, INTBASE, etc. Now, whenever that library is referenced throughout the program, its name will appear. If it's INTBASE, for example, and the offset is OpenScreen, then you know the location in a0 must refer to the screen parameters.

You can go to this location and rearrange the code in the form of a screen structure. LEFT/AMIGA/B, W, or L will force the code to byte, word, or longword format. And you can add remarks after any data or code line to explain what it means. But since the Screen, Window Menu, etc., formats are always the same, use one of ReSource's best functions, MACROS, to cut down on repetitive work.

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A ReSource macro is simply a compilation of all the menu selections or key presses up to the point where you end the macro. You might combine the first five words into decimal format on one line with a remark. Combine the next two bytes on one line as the pen colors. The next word is the ViewMode so use the library symbols to convert this to HiRes, Lace, etc. After the next word for screen type are four longwords for font, title, gadgets, and custom bitmap pointer. If any of the locations are not 0 you can start examining those locations. When your macro is finished use the End Macro menu function and there it is—ready to be used whenever you want. Be sure to save any macro you make before quitting the program.

One of the first things I did was to make nine macros for Screen, Window, Menu, MenuItem, MenuSubitem, Gadgets, IntuiText, Border, and StringInfo. Macros 1 to 9 correspond to the keypad 1 to 9 so all you have to do is press kp2, for example, when you've found the window location and there's all the window data, IDCMP classes and window flags spelled out, gadget location, etc. I've mentioned key presses a few times and that's another of ReSource's strong points. Almost every

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menu function has a corresponding combination of one to four key presses. Many, such as "e" for EXEC Library, "d" for DOS Library, or "g" for GRAPHICS Library, are obvious and easy to remember.

You might want to write down a list of the key presses for the menu items you use most. And you can modify these key commands to any combinations. Be sure to check, however, to see if the combination is already in use. My only change has been to make ESC the key to quit the program completely.

There is a second and more involved tutorial included in the manual. During the course of disassembling this program you'll be walked through a Gadget macro. There is one mistake in my manual. It keeps referring to "kp9" as the key for creating a label but this should be "kp*"; using "kp9" will execute macro9. This tutorial also shows you how to disassemble code when all variables are referenced as an offset from a specific address register, usually a4 or a5. I first saw this type of programming in the FAST FRACTALS article by Hugo M. H. Lyppens (*Amazing Computing* V4.11).

ReSource has made this way of programming easier to disassemble and is also a mini-lesson on how to use it. Not only does this technique cut down on code length and increase speed, but you can also write to a variable this way, something you can't do using Label(pc).

The current ReSource version (V5.10) will handle code written in the old 68000 Motorola syntax and the new 68020/030 multiple operand format. You can set a "preferences" to always show which style you're used to. And you can have the program use or not use common macros like PUSHM, POPM, BLO, etc. There are a lot of possible initial settings to use so experiment and find which suit you best. There is also a speed control for macros so you can step through them one line at a time by clicking the LMB while the title bar tells you what the next command will be; a very good way to debug your macros before saving them.

The last function about ReSource I want to mention is its ability to modify and add to existing code. Using the menu function ZAP you can over-write a byte, word,

or longword with any new value. If you add new lines of code you'll have to save the file as a .ASM and reassemble it. ZAP could be used to change screen/window size, IDCMP and window flags, increase the starting number of jet fighters in a game, etc.

Finally, a word about tech support. After using ReSource for a few weeks I had some questions so I called the number in the manual and spent over 30 minutes talking with Jeff Lavin, the owner of The Puzzle Factory. While he is not the writer of ReSource, Jeff is very familiar with it and answered all of my questions.

Every reviewer has to have a "wish list." I would only like to see two additions to ReSource. First, a quick way to edit macros, even before you save them; and next an "undo" button that would cancel just the last operation (wipe out that incorrect macro, etc.). It is a good tool for those who wish to break down and examine different programs. All in all, ReSource V5.10 is an excellent product for the individual who knows some assembly language and wants to increase their knowledge.

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ProControl

A Needed ADPro Utility

R. Shamms Mortier

Ask any Amiga artist or animator, and the answer is always the same: *Art Department Professional* from ASDG is one of their most prized pieces of software. It loads and saves both screens and animations in just about any format you can imagine, up to and including the ability to address NewTek's FrameStores, works on the compression and decompression of images, and "operates" on them with a bucketful of magical transformations. It has been ARexx-compatible for a long time, meaning that those of you who are studied adepts in ARexx coding could always whip up a script to automate the entire process and batch the effects. The ADPro manual goes to great pains to walk you through

from authoring something like it themselves. It retails for about a hundred dollars, and there will probably be various "bundle" configurations in the future that will bring that price down. The manual is thorough and clear, and the software is a long-awaited gem. ADPro users are going to want to rush out and purchase it, as it is the first release of several products that will address the same thing—albeit in different fashions. It works!

The ProControl Interface

ProControl is best loaded into the same drawer as ADPro so that it can find all of the Loaders, Operators, and Savers it needs. It takes a few moments to input all of these

no limit to the complexity of the process. Once finished, scripts can be saved and loaded later to address future applications.

The first step ProControl users take is to configure their "screen type," which is the same as working with the "Screen Control" section of ADPro. This is done by point-clicking on the interface gadgets in the middle of the ProControl screen. When complete, the "Inject" button is activated, an action that places the numeric equivalent of that screen type in the script. Hi-Res Vert/Horz Interlace, for instance, is screen type 27. Next, a rendering type is chosen from the section just below screen type, and another target line is automatically placed in the script, followed by a "dither type" from the list.

A Palette and Balance button are activated next. The associated lists allow you to interface with all of the palette and balancing operations that ADPro contains. This is accomplished through very well designed integrated menus that allow alterations at a glance. The wonder of the ProControl interface remains its ability to contain all of the complicated features of ADPro on such a small yet readable screen.

As you work with ProControl, adding Loaders, Savers, and Operators, along with other strings, you will see that it creates an ARexx script on the ADPro Actions screen on the ProControl interface.

several suggested ways to implement ADPro through ARexx, taking it for granted that you are burning with desire to get started. But let's tell the truth.

There is a game of pretend going on. We don't freely admit the truth to each other, afraid of derision and public shame, but very few Amigans that I have ever spoken to are fluent in ARexx. So the inevitable question is, "Has the marvelous ARexx doorway in ADPro been created for just a handful of users?" Up until now, that answer would have irritated ADPro's developers and embarrassed the rest of us. But wait, what's that on the horizon? It's ProControl, a diamond-valuable ADPro-ARexx utility.

ProControl was written by Doug Crane, and its distribution is a combined venture with ASDG. And little wonder that ASDG should jump on this software. It saves them

lists, and once that's done, they appear for selection on the ProControl screen. It also automatically loads ADPro itself, so that you can always get to ADPro easily. Though it will function on a machine with only 512K, I wouldn't try it. After all, at 512K, ADPro itself has serious limitations and probably won't work as expected at all. At this point in the game, WB 1.3 users need very seriously to consider upgrading to 2.x and beyond.

As you work with ProControl, adding Loaders, Savers, and Operators, along with other strings, you will see that it creates an ARexx script on the "ADPro Actions" mini-screen on the bottom right of the ProControl interface. This script is completely interactive, in that selections can be deleted and modified either automatically or manually as you go. Any script can also call upon other nested scripts, so that there is really

The first image-oriented line in the script is related to an image and its access pathway. With whatever type of image ProControl loads, a complete file requester pops up (Figure 2). This requester also includes parameters for image compositing, and multiple access paths can direct ProControl to get images from different sources. Images chosen are moved into a special Process list. A palette loader works in a similar fashion. Along with loading and saving scripts, along with comment files which remind you what they were designed to do, ProControl also allows you to save "States." States are scripts that remember image files and file paths as well as other commands. A Preference menu allows you to save default paths and file extensions to be used when images are saved.

(continued to page 24)

Caligari 24

R. Shamms Mortier

There are many changes in *Caligari 24* 3.0. This inexpensive (\$249) version of the Caligari line of software for the Amiga is the best yet in the family of Caligari packages. The first indication that things are really different this time around, however, isn't in the software at all, but in the new manual of clear and concise documentation and helpful tutorials. This is the first Caligari manual that really walks you through the Caligari looking glass, and is by far the best. Thanks for this is owed to Roman Ormandy, Caligari's author. It's really a nice bridge to the software and its myriad of tools and processes. The Caligari 24 software is also the first package in the Caligari group to admit its connection to the Amiga by sublimating its previous, and irritating to most Amiga users, attention to Targa and Vista files. Yes, these options are

still there for those Amiga animators that have somehow ignored the fact that the present glut of Amiga 24-bit boards matches anything the competition can offer at a fraction of the cost in most cases, but it's hoped that the Big-Blue/Apple-addicted Amiga user community is becoming a welcome but diminishing minority. Having reviewed every major Caligari package over the years for *Amazing* readers, I am happy to continue the process with this article. In addition to touching upon the various Caligari bells and whistles, I'd like to dwell more thoroughly upon the

new advances this version offers over its progenitors.

Buzz-Word Designer

Since its inception, Caligari's most enjoyable feature has been its Object Design screen. Recently, we've all been bombarded by the term "virtual reality." Octree is using that term in its promotional efforts to allude to the Object Design screen, and I fully support that message. *Virtual Reality* is the best way to describe the look and feel of designing objects in Caligari, especially in the Perspective



mode. You actually get a feel for the 3-D wireframe elements you move, rotate, and resize. The entire perspective plane can be rotated and zoomed as well, and it's even possible to achieve a fish-eye lens look to the environment while all of this is going on. Elements of a complicated object can be "glued" together in a hierarchical fashion and saved. This is great for moving selected elements of an object in an animation, since it makes it easy to create smooth movements.

Object Design is where color lists are targeted to object elements, and where you can use the library of Caligari "primitives"—sphere, cone, cylinder, cube, etc.—as well as take advantage of the extruder module to design your own objects and object parts. Extrusion as well as lathing functions are supported. But now there's more. The Extruder module also allows you to import a two-color 2-D drawing made in a paint program so that you can trace around it. Logo animators take notice. Perhaps a future version will add the capability to import D2D objects directly, as from Soft Logik's *Art Expression* software, or even

PostScript files. Not that the present situation isn't appreciated. There are two new processes here that I must mention. One is the ability to dynamically "Quad-Divide" a selected object. This operation multiplies the polys of a selected object by four each time it is applied, giving you a much finer grid when using the Point-Edit functions. The new addition is the Deformation tool. With this baby, you can stretch an object's polygonal grids in any direction, and achieve some very nice organic forms. There is an excellent tutorial utilizing this process that allows you to practice while building a nice little spaceship. As with previous versions of the software, you can do a hi-res test render of a selected object by tapping the render button. A poly-shaded image appears in seconds, and in far less time each succeeding time the rendering of the object takes place. This is one of the fastest renderers around for previewing. Images can also be printed out at this time, and colors can be assigned to various parts.

Point Editing

At this juncture, most of the Amiga professional 3-D packages allow some form of point editing. This means that you can select a point, edge, or planar poly surface on an object and stretch, extrude, rotate, or resize it. Very complicated forms can be created in this manner. Again, the new manual offers an excellent tutorial for getting used to this process, the same spaceship tutorial mentioned above. What makes the process in Caligari so enjoyable is that you can actually feel the response of edited points because of the Design Module interface. You could take a sphere, for instance, and use the point-editing features to pull and stretch it until a face was created on its surface. The point-editing tools are very intuitive to use, and a snap to get used to with just a little practice.

After saving objects on disk, they can be loaded into a scene for finished rendering and animation. The objects, by the way, do not have to be created in Caligari alone, since the software allows the importation of *LightWave*, *Imagine*, *Sculpt*, *DXF*, and *VideoScape* files as well.



Scenes can be either keyframes in an animation or groupings that are to be used as pictures. You could even save a scene as a picture, and then turn around and use it as a texture for an object, thereby creating an "environment map," an ostensible reflection of the world on a reflective surface. Once you have imported an object into a scene, it can be cloned or copied—and there is a big difference. Cloned objects can be manipulated just by acting upon the parent object. Copied objects, on the other hand, are individual in nature, and do not react to any manipulation of the parent. The Scene module can be rendered either as a "QRender" or as a "BRender." As a QRender, the image can be previewed in a hi-res format. It is in the BRender (Broadcast Render) mode, however, that real 24-bit results are possible.

The Intricacies of BRendered Images in Caligari 24

Caligari 24, as its name suggests, was created, or maybe even renamed, because it has become obvious that the Amiga is now a 24-bit graphics platform, and it's here to stay. Therefore, Caligari 24 renders images and frames to suit that environment. The Amiga user who doesn't own a suitable framebuffer or 24-bit card is missing out in general, and as far as this software is concerned, to create the renderings that really wow your friends and confuse your enemies, you've got to have other hardware as well. DCTV owners will thrill at the way Caligari 24 writes to their black boxes, and OpalVision users will be even more ecstatic. Even Amiga owners of the now defunct HAM-E device from BlackBelt will find solace in Caligari 24's ability to write to that format. To sum it up, Caligari 24's Broadcast Rendering (BRender) module addresses most of the Amiga's professional quality 24-bit engines, and even takes the AGA machines into account.

The BRender menus allow you to target all of the quality rendering possibilities you need as an Amiga animator. Texture mapping, for instance, is set in this module. Caligari 24 now accepts any Amiga 2-D work as a texture map. All you have to do is to tell it to translate the image, and then set the map type: planar, cylindrical, spherical. I still do not understand the way that you can graphically alter the projections via the texturing interface. This is an area that needs more tutorial guidance in the docs. As for BRender's capacity to target various material properties to a selected object, sliders and options abound. There is

Hue/Saturation/Value for color, a 256-level Transparency slider, and my most favorite...the metallic settings. Caligari 24's metallic looks are some of the best in the business. In addition to being able to react to your input in the design of various metallic surfaces, Caligari 24 has a library of loadable settings that mimic gold, silver, brass, steel, and several other surfaces. You can also design, name, and save your own to the same library. Metallic surfaces are also best to use in conjunction with transparency settings for glass objects. Surfaces may also be faceted, Garaud, Phong, or Metallic, and can be slightly to thoroughly anti-aliased. You can target an image to accept IFF 24-bit backgrounds and foregrounds as well. At any time in the rendering process, a Ctrl/C keyboard command will abort the rendering.

Lights

There is no limit to the number of lights that can be set in Caligari 24. The problem is, they have no graphic icons on the screen, so you must infer their position by numerical means. This is a serious shortcoming of the software, and one that I keep harping on in Caligari reviews. At a time when all of the competition allows you to graphically place lights—LightWave 3.0 even allows you to use the light as a camera position in addition to giving you a graphical image to reposition—it is time Octree found a way to address this one irritating anomaly. Other than that, however, the lighting options in Caligari 24 are very thorough. A nice addition here is the new "Move Eye to Light" button, which does increase the intuitive capacity of light placement. Lights can be specular or diffuse by degree, and either infinite, global, local, or spotlights. Their beams can be from wide to narrow, and they can be any color you desire.

Animating

About half of the Caligari 24 manual is dedicated to the learned use of the scripting language Caligari uses to animate images. I know some folks swear by scripts, but I have always preferred the visual approach. To suit others like me, Caligari 24 offers a visual keyframe option, much like that used by LightWave and other Amiga 3-D software. Use is simple. Just place your objects in a scene and target that scene as a keyframe. Next, advance the frames to a suitable number, maybe ahead by 10 or 20, and move the objects to a new position. Then create another keyframe. Do this as often as desired. Finally, compile the frames—a button is provided—and play

the wireframe sequence for preview. If not satisfied, make changes. If satisfied, render the animation to disk. The ANIM menu has to be used as a first step even if you want to write out just one finished BRendered frame. Animated results can be batch-processed in software like ASDG's ADPro or BlackBelt's ImageMaster, and tweaked or edited in DPaint.

Conclusions

Caligari 24 is another serious Amiga 3-D/4-D software package. At one time, it was the only software around that you could use to get true broadcast results. That's so because it addressed framebuffer and renderers that existed only on PC systems, and did this through the Amiga BridgeBoard. But times change, and the Amiga now has some of the most professional software and hardware around for video work. Instead of giving up the ghost, as some other software has done, Caligari has steadily been revised and upgraded, taking advantage of the latest trends in computer graphics, and even setting some trends itself. Caligari 24 requires a fat hard drive in addition to the other niceties mentioned, because it writes temporary files to the hard drive while doing its rendering tasks. Though I haven't had any problems with this, it sometimes makes me nervous. The object modeling screen is as wonderful as ever in this edition, and is greatly enhanced with the deformation tool and the quad divider. The fact that it handshakes with so many of the other Amiga packages doesn't hurt its longevity either. The revised manual is very well organized and sets the pace for any upgrades that may follow. My comments about graphic lights still holds, and I hope this is addressed in the near future. The BRendering functions, including addressing Amiga IFFs for texture mapping is a welcome addition. This software remains as an Amiga package with which you can create serious and qualitative professional work.

Caligari 24
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 Mountain View, CA 94043
 (415) 390-9600
 Inquiry #229

Amazing Computing

Your source for reviews of the latest Amiga products.



Correction

In *Amazing Computing* 8.8, August 1993, the product information for *T-Rexx Professional* was incorrectly listed. The error appeared on page 38. *T-Rexx Professional* was attributed to the incorrect company. The correct product information for *T-Rexx Professional* is as follows:

T-Rexx Professional
ASDG, Inc.
925 Stewart St.
Madison, WI 53713
(608) 273-6585

We apologize for any inconvenience this may have caused.

—ProControl continued from page 20

More Features

ProControl has some nice nesting features, allowing scripts to be called from within scripts. It actually treats images in a script as "real" before the operators actually make them, so that images not yet saved to a file can be called upon to take another alteration. This makes for fast and more intuitive scripting. All of this is accomplished by activating the "Files" button in the Load requester.

Animating Batches!

At last! Now many of your favorite operators can be applied to batches of images, creating exciting new animation possibilities. ProControl allows you to initiate motion on two ways. Numerical values may be incrementally increased by any amount during a looped running of a script. This is done by using the formula "x/y" in any numerical input area. Here, "x" equals the starting value, "f" means "Finish," and "y" equals the ending value. For instance, if you needed an image to rotate a total of 100 degrees in ten degree increments, you would use the string "10f100" where the rotation is called for. In those situations where exact pixel movements are to be delineated, the formula "x/y/d" is used. Here "x" stands for the starting position, "d" means "delta" (change coefficient for an animation frame), and "y" equals the number of pixels to be moved. Let's say you wanted an image or brush to move in the negative z plane by ten pixels each frame, starting from a z position of 100. You would find the z input area and write "100d-10." ProControl allows this numeric scripting in any of the ADPro operators that have numeric input boxes. To animate, you must also toggle the "Set Iteration" feature by double clicking in any line in the desired animation script. By setting an Iteration number—equal to the number of frames you want in the animation—the script will run that many times. There is a special "Use This Setting" toggle associated with the iteration feature that even allows you to skip the iterations for desired cases. By using multiple Loaders on the same image and treating the numeric indicators differently, images may take turns and twists during the finished piece.

Sample Scripts

Just to give you a little feel for ProControl scripts, here are a few that ad-

dress some alternate situations:

1. This script will load in a NewTek FrameStore, change its color to gray, halve its dimensions, flip it horizontally, make it a negative, then render it as a 16-color hi-res interlaced overscanned IFF to a file. By selecting any of the lines and setting the iterations to 10, it will do this operation on the same picture 10 times in a row, creating an animation file on disk in the process.

```
Screen Type 27
Loader FrameStore 1
Operator Color to Gray
Operator Halve
Operator Horizontal Flip
Operator Negative
Render Type 16
Execute
Saver IFF Image
End Of Script
End of Batch
```

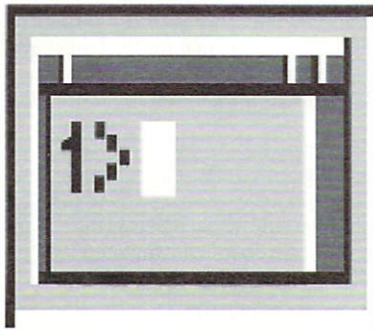
2. Here is a script that loads a JPEG file, antiques it and places it in perspective, and then renders it as a simulated halftone to the screen. From there, it is rendered as a HAM8 file and saved. As with the other example, this could also be set to be a multiple-framed animation.

```
Loader JPEG 1
Operator Antique
Operator Perspective
Operator Sim Print HA
Screen Type 27
Render Type HAM8
Execute
Save ANIM Image Fast
End of Script
End of Batch
```

Hoped-for Revisions

It would be nice if some of the visual operators automatically triggered ADPro to bring up those specific interface screens, so that a more graphical, rather than numerical, exploration of the input variables could occur. Other than that, this software is extremely intuitive and of value to all ADPro owners. It is easy to use in most cases, and when your ADPro animation desires get more complex, a thorough reading of both the ProControl and ADPro manuals should suffice.

ProControl
ASDG
925 Stewart St.
Madison, WI 53713
(608) 273-6585
Inquiry #230



cli^{by} Keith Cameron directory

In recent months, I have reviewed what I consider frequently-used AmigaDOS commands. If you have understood these commands, then you should be ready for the next step: writing script files.

First of all, just what exactly is a script file. Those of you familiar with the Amiga will recognize that a script file is executed each time you power up your computer. In your 's' directory, there is a very important script file called "startup-sequence." Recent versions of Workbench may have other additional script files in the 's' directory, such as "Shell-startup." Those of you coming from an MS-DOS environment may wish to think of script files as the Amiga version of batch files.

Technically, script files are text files containing one or more AmigaDOS commands that are executed in sequence. I find them to be especially useful for performing repetitive tasks. Let me provide an extended example.

I am a teacher. The computer I use at school is one that my students have access to. I maintain an electronic grade book on that computer. It is installed on the hard drive, and I have installed a menu that requires a password to enter the grade book. This provides some security from students messing with the grades. Still, I have taken another precaution to protect it from students who might wish to tamper with grades or erase them altogether. Each time I update the gradebook, I execute a script file which copies the update to a floppy disk which I can then lock away in my filing cabinet. Now rather than typing a lengthy command line, such as "copy gradebook/5thsixweeks df0:" I simply enter "gradecop" and hit the return key. Not only does this provide protection, but I can also take the grades home and work on them using my home computer. This illustrates how a script file can reduce repetitive work. There are other advantages of script files as well, but for me, this is the major advantage.

Now, how do you write a script file? It really isn't that difficult. A script file, as I said, is simply one or more AmigaDOS commands working in sequence. Let's look at an example of one. Printed below is a copy of the startup-sequence from my computer.

```
c:version >NIL:
addbuffers >NIL: df0: 15
Failat 21
Resident >NIL: C:Execute PURE ADD
mkdir ram:T ram:Clipboards ram:env ram:env/sys
copy >NIL: ENVARC: ram:env all quiet noreq
assign ENV: ram:env
assign T: ram:t ;set up T: directory for scripts
assign CLIPS: ram:clipboards
assign REXX: s:
if exists sys:Monitors
  join >NIL: sys:monitors/~(?.info) as t:mon-start
  execute t:mon-start
  delete >NIL: t:mon-start
endif
run blanker 120
BindDrivers
setenv Workbench $Workbench
setenv Kickstart $Kickstart
```

```
IPrefs
echo "Amiga Release 2. Kickstart $Kickstart, Workbench
$Workbench"
conclip
mount speak:
mount aux:
mount pipe:
path ram: c: sys:utilities sys:system s: sys:prefs
sys:wbstartup add
if exists sys:tools
  path sys:tools add
  if exists sys:tools/commodities
    path sys:tools/commodities add
  endif
endif
if ${sys:keyboard} NOT EQ ""${sys:keyboard}"
  setmap ${sys:keyboard}
else
  PickMap sys: initial
endif
if exists s:user-startup
  execute s:user-startup
endif
loadwb
```

First of all, as a type of review, let's consider how I inserted this startup-sequence in my article. I could have painstakingly sat down and typed in each line, but this would have taken a considerable amount of time. Instead, I used the JOIN command, as illustrated below:

```
JOIN DF1:SCRIPT DF0:S/STARTUP-SEQUENCE AS DF1:SCRIPT1
```

In this example, my article is named "script" and the startup-sequence is joined to it to make "script1." That's how easy it is. Now, back to the script file.

If you examine this script file closely, you will notice that the first word in each line of the script is an AmigaDOS command. There are several present that we have looked at in the past few issues, like MAKEDIR, COPY, PATH, DELETE, and LOADWB. There are still others that I have described in the past year, such as ASSIGN, RESIDENT, JOIN, EXECUTE, RUN, and SETMAP. There are also a few I have not discussed yet, for example ADDBUFFERS, SETENV, CONCLIP, and MOUNT. Then, there are a few that are specifically used in writing script files. These are FAILAT, IF, and ENDIF. I hope to look at these in the next month or two.

The point I hope to make here is to demonstrate that there is nothing complex about script files. They can use common, everyday AmigaDOS commands just like those we have discussed month after month. If you are a regular reader of my column, you will have absolutely no problem.

When you boot your Amiga, it automatically looks to the startup-sequence for instructions. As it reads this script file, it executes each line. If a line is improperly written or the command is missing, the computer will stop and present you with a requester informing you of the problem. After you respond to the requester, the computer will continue to execute the commands in the script. For example, look at the fourth line of the script, the one that begins

with RESIDENT. This line, when executed, makes the EXECUTE command resident; that is, it temporarily adds it to the internal command list. EXECUTE is not an internal command. If you were to remove this command line, EXECUTE would not be added to the internal list. In the next line, the script creates four new directories in the RAM disk: T, Clipboards, env, and sys (in the env directory previously created).

In the commands listed in the startup-sequence, don't be concerned at this point about NIL. NIL is simply an output device that files can be written to. Everything written to NIL is eventually thrown away.

As you go through this list, you will undoubtedly be confused by certain command lines; I am too. Don't let this deter you from trying your hand at writing script files, though. Yours don't have to be as complicated and certainly not as long.

You can alter this startup-sequence, too, if you like. About one-third of the way down, you will notice this command line: "run blanker 120." I added this. It tells AmigaDOS to run the screen saver program called Blanker which is found on the Extras disk. The 120 tells the blanker to wait 120 seconds after keyboard or mouse inactivity before blanking the screen. Since I have added Blanker to my 'c' directory, no path designation is needed.

You can also delete lines. For example, if you want to have a true command line environment, delete the last line: "loadwb." With this line missing, you will have no Workbench screen. Some of you may have also noticed that I have already deleted a line from my script: "endcli." Since I like working from the CLI, I chose to delete this line from my script so that the command line screen will remain. However, I also like to have the Workbench available, so I have left the "loadwb" line there.

Rather than delete lines from a script such as this, you can simply place a semicolon at the beginning of the line as in this example.

```
;endcli
```

The semicolon is a signal to AmigaDOS to ignore the command. Then, at a later time, you can simply remove the semicolon and the line is ready for execution. You can also use the semicolon at the end of a line to document what you are doing. Here is an example:

```
;endcli ; I may want to add this command later
```

Everything to the right of the semicolon is ignored. Those of you familiar with programming will begin to see some similarities between script writing and programming, especially as regards such documentation.

Now that you know what a script file is, let's look briefly at how one is created. To create a script file, you need to use a text editor or a word processor which allows the file to be saved in ASCII. All you do is enter the commands you want in the order you want. Be sure to have one command to a line. If you are new to this, don't hesitate to use semicolons to document what you are doing.

After you have created the file, give it an appropriate name and save it. Basically, when you are ready to use a script file, you can either use the EXECUTE command with the name of the file or you can simply use the file name. For now, it is better to use the EXECUTE command. At another time, we will discuss and examine when it is best to use which. To execute a script file, type the following in from the CLI:

```
EXECUTE SCRIPTFILE <RETURN>
```

That's all there is to it. Then, as each line of the script is read, it is executed. To see a good example of using a script file, refer to an article of mine in the January 1992 issue of this magazine. For those of you without access to that magazine, let's consider another situation.

As I've said before, I am a teacher by profession. I have four computers in my current classroom. As I acquire new programs, I install them on the hard drives of these computers. Since these computers are not networked, this means that I have to repeat the copy procedure for each computer. Likewise, other classrooms in

the building have four computers as well, and these teachers often want these programs loaded into their hard drives. Since some of these teachers are not very computer literate, that means I must go around and personally load the programs into each computer, one at a time. To save myself a lot of trouble, I began writing script files to do the repetitive work.

Say, for example, that I have three new programs I wish to copy to my hard drive. Let's call these programs Gradebook, Game, and Tutorial. Before copying, I would have to create a directory for each one, and the directory could have the same name as the program. Thus, I would begin writing a script which would look like this:

```
MAKEDIR DH0:GRADEBOOK DH0:GAME DH0:TUTORIAL
COPY DF0:GRADEBOOK DH0:GRADEBOOK
COPY DF0:GAME DH0:GAME
COPY DF0:TUTORIAL DH0:TUTORIAL
```

First of all, notice that I created all three directories with a single AmigaDOS command. Next, I copied the programs from a floppy in the internal drive to the designated directories on the hard drive. Finally, I did not include the customary <RETURN> instruction, as this is being written by a text editor, not in the actual command line.

I would save this script file (using LAZY as the name of the file perhaps) to the floppy disk that all of the other programs are on. I would then go from computer to computer, simply typing

```
EXECUTE DF0:LAZY <RETURN>
```

at the command prompt of the Shell/CLI. The computer would then execute each line, creating directories and copying programs as instructed. Rather than having to go around and personally copy the programs on the computers of other teachers, I could simply write the command line above on a note and let them do it themselves. The amount of effort I have saved is substantial. Remember that I'd have to write the command at least once anyway, so I have created no work whatsoever.

To further compound this task, say that these other teachers wanted to run a screen saver on their computers. I could then simply add more lines to the file above.

These lines might look like this.

```
DELETE DH0:S/STARTUP-SEQUENCE
COPY DF0:STARTUP-SEQUENCE DH0:S
COPY DF0:BLANKER DH0:C
```

These lines tell AmigaDOS to delete the startup-sequence that is currently on the computer and replace it with another one, like the one printed near the beginning of this article. Of course, this new one already has blanker listed so that it would be run upon booting. The final line makes a copy of the screen saver program on the hard drive.

Basically, I have attempted to explain what script files are, why they are useful, and how they are written. Anytime you have a series of AmigaDOS commands that need to be executed repeatedly, try putting them in a script file. In future columns, we will examine how to write more complex script files and make them executable from an icon for those of you who prefer Workbench.

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bug bytes

by John Steiner

tips
hints
workarounds
suggestions
updates
fixes

The Director vs. AGA

Robin Hoare of Hokianga Software in New Zealand writes to note that he has written three educational applications which have been selling quite well. The programs were written in *The Director* language, developed by the Right Answers Group's Keith Doyle. It appears that the programs now crash on the Amiga 1200 with AGA graphics chips. "I have twice written to Right Answers, but have had no reply. The help phone number has been disconnected.

Robin comments, "It is a complete disaster for me to rewrite the programs in another language as it would be so time consuming. I have tried the built-in WB 1.3 chip emulation, but no go." Does anyone have any suggestions for Robin? If you have a solution, drop me a note; I'll pass it along.

Xerox 4045 Driver

Bob Schulien sent E-Mail noting he has a printer driver for the Xerox 4045 printer. He has sent the driver to Mr. Fish, and comments that it can now be found on one of the Fred Fish disks. He noted that he's used the driver to print graphics from 'Tax Break' and 'Pro Page 2.1.'

AE High-Density Drive

Phil Combs provided via E-Mail an answer to questions about using the Applied Engineering High Density Drive mentioned in the June 1993 "Bug Bytes." His answer was as I expected. As Mr. Combs pointed out in his article on high-density Amiga drives in the July 1993 issue of *Amazing Computing*, putting information on a disk in high-density format is done by cutting the drive speed in half. Phil notes, "It seems that AE attempted a half-speed hack on an IBM drive, but couldn't get the drive to lock at half speed. They did get it to lock about 180 r.p.m., and made up for the difference in software. When 2.0 came out with its support for the Amiga HD drive, they probably realized the drive needed major mechanical rework, and they probably shuddered at the thought of having thousands of these drives returned to them."

High-Density Drives, CDTV, & More...

Max Daymon of Colorado Springs, CO, also wrote with comments regarding high density drives on the Amiga. He notes that the 2.05 ROM has built-in support for high-density drives, but the 2.04 ROM handles them just fine. The version of Setpatch in the 2.1 upgrade patches the 2.04 ROM to properly use high-density drives, "although I have not had problems prior to installing 2.1."

Max continues, "Also, only high density drives that spin at 150 r.p.m. can be used in the Amiga. You will notice when you install a high density drive into an Amiga system, formatting disks will take twice as long in high density mode whereas the IBM handles read/write operations at twice the normal speed when in high density mode."

Max also wrote regarding Jim Goos' question about RAD in the June 1993 "Bug Bytes." He writes, "The RAD disk should work just fine with a 1 (or 2) MB Agnus and OS 2.1. Previous to OS 2.1, you had to type 'SETPATCH r' after every reboot or you would lose the RAD disk. The only reasons for a RAD disk not working are an improperly set-up RAD disk, or NON-autoconfig memory in the system. If your system does not

autoconfig all memory, the RAD disk may be placed in RAM (i.e., 32-bit RAM) which disappears after reboot."

Max has a question about Screenmode in OS 2.1. He writes, "The problem is that after I open certain programs on the workbench screen, then quit, Screenmode ceases to function." After running a program that exhibits the problem, and the Screenmode requester loads, "I click on a mode, then hit 'use'. A requester appears stating to 'Close all windows except for drawers, then click OK'. Well, there are no windows on the screen. It repeats this cycle four or five times before the requester stays long enough to choose a button, and ultimately I must choose 'Cancel.'" If you have any comments, pass them along; I'll print them here.

Janus v2.1

Doug Hart wrote another E-Mail letter to comment further on the Janus v 2.1 software for the Bridge Board. He notes, "The code will not even run unless Enforcer is used. Commodore even supplies a copy of Enforcer with the upgrade. I am not a developer but I understand Enforcer is used to capture bad code calls (hits) that would GURU the system." He wonders whether or not that makes the Janus upgrade an example of proper Amiga programming.

BAD v4.13

Ross Knepper sent E-Mail to comment that he also owns BAD version 4.13. He writes, "It does not recognize my A4000's 124MB Seagate IDE Hard drive. It seems to think I have no hard disk at all." Anyone suggest any workarounds or have any other comments on this bug?

ARexx vs Directory Opus 4

Jonathan Potter sent E-Mail regarding Glen Corlin's problem with *Directory Opus* as reported in the July 1993 "Bug Bytes" column. He notes, "There are two main reasons why he could be having problems running ARexx scripts from Directory Opus 4. The first is that the ARexx port name has changed from version 3. The old port name, "dopus_rexx" has been changed to "DOPUS.1" (to be compliant with Commodore's style guide). Second and third invocations of the program will be called DOPUS.2, DOPUS.3, etc."

He continues, "One side note to this; if he is launching ARexx scripts using the tiny A button or from buttons configured as ARexx functions, it should not generally be necessary to specify any port name, as the default port will be that of the launching program."

"The second reason he could be having problem is that the conversion done (automatically) to make 3.41 configuration files work with Dopus 4.0 'lost' the old function type definitions. Therefore, any old function defined as being ARexx became defined as a normal AmigaDOS command. He needs to re-configure these functions, changing their type to ARexx again."

INOVAtronic Calling Mr. Corlin

Greg Glaser of INOVAtronic also wrote to comment that he tries to respond to every letter a customer writes to his company, but wonders if Mr. Corlin's APO address is causing a communications problem. Anyway, Mr. Glaser notes that the change in ARexx address from Dopus to DOPUS.1 is most likely causing Mr. Corlin's problem.

HP Deskjet 550C

Bill Davis of Picatinny Arsenal, NJ, sent E-Mail with a couple of questions about using an HP Deskjet 550C with his A1000. He wondered about the availability of a printer cable for connecting the two units. He noted that his local Amiga dealer was of no help. One excellent source of Amiga-specific cables is:

Redmond Cable Corp.
17371 A1 NE 67th ST.
Redmond, WA 98052

Bill also asked if there are available print drivers which work under 1.3 other than the commercial driver Super_DJC2 advertised in the June 1993 issue. If you know of any drivers, pass the information along; I'll let everyone know.

Attention Zaak O'Conan!

Dan James sent E-Mail noting he has information wanted by Zaak O'Conan, and I was to have Zaak contact Dan. Zaak, I've misplaced your E-Mail address, but if you drop me another E-Mail line, I'll pass Dan's address on to you.

Troubled NEC CDR-25 User

Greg Bastow sent along an E-Mail letter regarding his experience with a NEC CDR-25 external, portable CD-ROM drive for his Amiga 3000. He was under the impression that this was a standard SCSI drive that would simply plug into the back of his Amiga 3000 and function properly. Unfortunately he ran into problems.

He writes, "I bought the XETEC CD-ROM filing system software (as it is highly recommended to me by a number of other BBS System Operators). At first it seemed to work, but it would lock the SCSI bus when AmigaDOS/Xetec-software polled the device. At first I thought it was a problem with either the filing system software, or something to do with my drive's situation (this drive made my SCSI bus full) and how they were communicating to each other.

"After working with the software for several days, and changing my drive setup a lot I thought it best to go back to Xetec to see if they had any suggestions. I spoke with Fred in Technical support and he offered a number of suggestion for me to try. I moved the ID of many of my drives around, making the CD-ROM live in many different locations on the SCSI bus. I even went so far as to plug a 2091 controller card in and see if it would work. None of these changes solved my problems 100%—the drive would still freeze the SCSI bus when polled. It would take anywhere from several minutes to more than 30 minutes of steady usage for this to happen. All I had to do, was turn the unit off and on and it would 'correct' itself.

"After two weeks of fighting this drive, I made a desperate phone call to Paul Reeves at Asimware. Even though I had not bought his filing system, he was more than willing to help me, and enlighten me. Through the information I received from him, and Commodore Business Machines themselves I learned that this is *not* a standard SCSI mechanism and it has problems working on Amiga 3000's. I have sold the mechanism and I am on the hunt for a real SCSI CD-ROM drive.

"I am letting you know in hopes this information will save someone else a lot of time, effort, and sleepless nights!" Thanks for the warning, Greg; that's what "Bug Bytes" is all about.

Greg Bastow also sent E-Mail regarding a patch/bug fix for Moonlighter Software's popular *AmiBack Tools* package. The latest version is 1.02 and the patch fixes a couple of small problems with the program. The latest version of *AmiBack* is 2.0g. He also notes that they have also released a package called *AmiBack Plus Tools* which contains their powerful backup program *AmiBack*, and *AmiBack Tools* in a single package.

Scalable Fonts

Michael Haephtrati sent E-Mail regarding problems programming with scalable fonts. He writes, "when asking the system for a double size of the same Compugraphic font, I usually can't know for sure what will be the width of each character of the new size. Is it possible to have control on the width and not the height? Can I ask for a new size in which every character's width (spacing, etc.) will be exactly 2X from the original?" Anyone with expertise in using Compugraphic fonts want to comment on Michael's question?

Maverick v5

Steve Hostettler of Toledo, Ohio, sent E-Mail regarding the program, *Maverick*. It can be purchased through Software Support at 1-800-356-1179. He writes, "If you wish to utilize *Maverick* be prepared. You will need the 'passwords' to the programs you are trying to de-protect and in some cases (for track protection or other types of 'hard' protections) you will need *Maverick's* 'Back-up Buddy' floppy drive. Version 5 is the latest version of *Maverick* for the Amiga."

He also notes, "I have found another program called *Lockpick* which works similar to *Maverick* but does not require the 'passwords' or the special drive. *Maverick*, however, will copy and/or de-protect more programs than *Lockpick*. But it is nice to have both programs."

DCTV Anims & The Director

Barbara Sattler of San Pedro, CA, wrote a three-page letter filled with programming information directed to Norman Wersan's request for help in running *DCTV* animations in *Director2*. I photocopied her letter and passed it on in its entirety to Mr. Wersan. To summarize her comments for others interested in using *DCTV* and *Director2*—the problem with *DCTV* images is that the coding for *DCTV* display is imbedded in the upper left corner of the image. Therefore it is essential that the image be complete and positioned properly in order for this information to be read. Most display programs handle this automatically, but *Director2* allows so many options that you must make sure that it is set up correctly yourself. Just use the *POSITION* command at the start of your script. She recommends *POSITION 100,24*, however you may want to experiment with different placements yourself. Thanks, Barbara, for taking the time to write.

Distant Suns v4.2 Bug

Dr. Scott Michael of Conyers, GA, writes regarding a bug in *Distant Suns* version 4.2 from Virtual Reality. One of the new features is the ability to save a startup-state that includes all of the settings that you usually use, such as star magnitude displayed, markers, field of view, and initial direction. If you save either *Colormap-IF* or *Colormap-Stars* as anything except normal, the initial screen will flash the starfield for an instant then blank out the stars. Planets, markers, the sun and the moon continue to be displayed. To get the entire display you can 1. reload the startup state from the menu, 2. toggle the twilight option off switch; this works even if it is already off, or 3. save the startup-state with the *Colormap* options in the normal position so that it will load without problem and select an option other than normal after the program loads.

Dr. Michael notes that Tim Finer of Virtual Reality told him that they are aware of the bug and are currently working on a fix.

Roctec Drive, X-Cad Suggestion

Mark Spitzer of Remlap, AL, notes that he purchased several inexpensive floppy drives to replace the old drive he had been using. After finding each inexpensive drive giving a high number of read/write errors, even on high-quality brand-name disks, he began to wonder if there might be some problem with his Amiga. He decided to try one more time and spent an extra \$14 for a Roctec Ultra-Slim drive. He notes, "It works flawlessly, is quieter, and seems more precision-made both in appearance and operation; also it even has a no-click feature built in and is absolutely quiet without a disk in it."

He also notes that *Maverick* (mentioned above) is a copy/utility program that has a parameter that removes dongle protection for a program listed as *X-CAD 3d 1.1*." This feature might be used to help Rick Geren's problem with *X-Cad Designer* as mentioned in the June 1993 Bug Bytes.

Peffect Sound Parallel Adapter

Harry Runge of Reston, VA, writes to comment about J. Lewis's problem getting the *DSS Sound Module* to work on the Amiga 1000. He notes, "Perfect Sound sells an adapter for the parallel port. I had the same problem with getting the Golden Image hand scanner to work. The Perfect Sound adapter cured the headache. As I recall, it cost \$10.95."

Write to:

John Steiner
c/o *Amazing Computing*
Box 2140
Fall River, MA 02722-2140

...or leave E-Mail to
John Steiner on Portal
73075,1735 on Compuserve
Internet mail can be sent to
John_Steiner@cup.portal.com
FAX John Steiner at (701)280-0764

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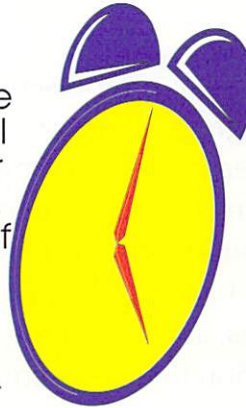


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Adventures with Aladdin 4D: Part Three

In *Aladdin 4D*, a list is represented by three hierarchal requesters that allow you degrees of input so that specific graphics can either be added to the screen or made to appear with specific properties once they are on the screen. There are five main Lists in A4D: Attributes, Textures, Foreground, Background, and Overlays. Knowing your way around A4D Lists also helps you when it's time to create and alter Gases, Waves, and animation Paths. Little wonder then that we should pay attention to the structure and use of Lists.

As stated, an Aladdin List is really a group of three connected requesters. The first list allows you to add a new List, clone a list already addressed in the project, delete a selected one, and cleanup the List categories. Normally, you would add a List at the start of

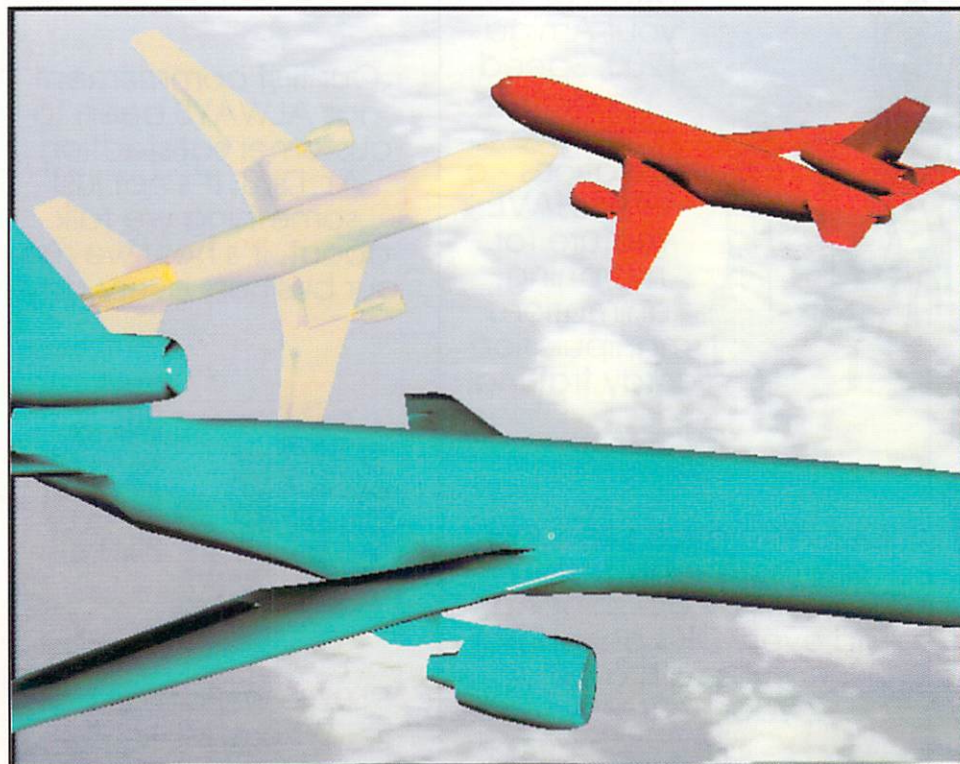
the project. After selecting Add, you then move on to a button that reads Control. Clicking this button brings up the second of the three associated List requesters. This list is named the Control. This Control List allows you to load previously saved Lists, or to save the list you are working on when you

are ready. This is where you also can rename the List.

This second requester allows you to determine how many times your object's attributes will change over time by offering you a dedicated area where you can input a numeric string. There is also a toggle between Cycle (runs the objects Attributes from beginning to

Left: With the options in the Member Control AtList requester, attributes like color and transparency can be targeted to specific 3-D objects.

Opposite: The top figure uses the Line Type called Poly Centers, and the bottom uses its opposite, Edges. These features can be animated, so that a flying object might start out as a solid, and then change into one of these line types.



This session, the Attributes List: how to navigate around it and understand what it can do.

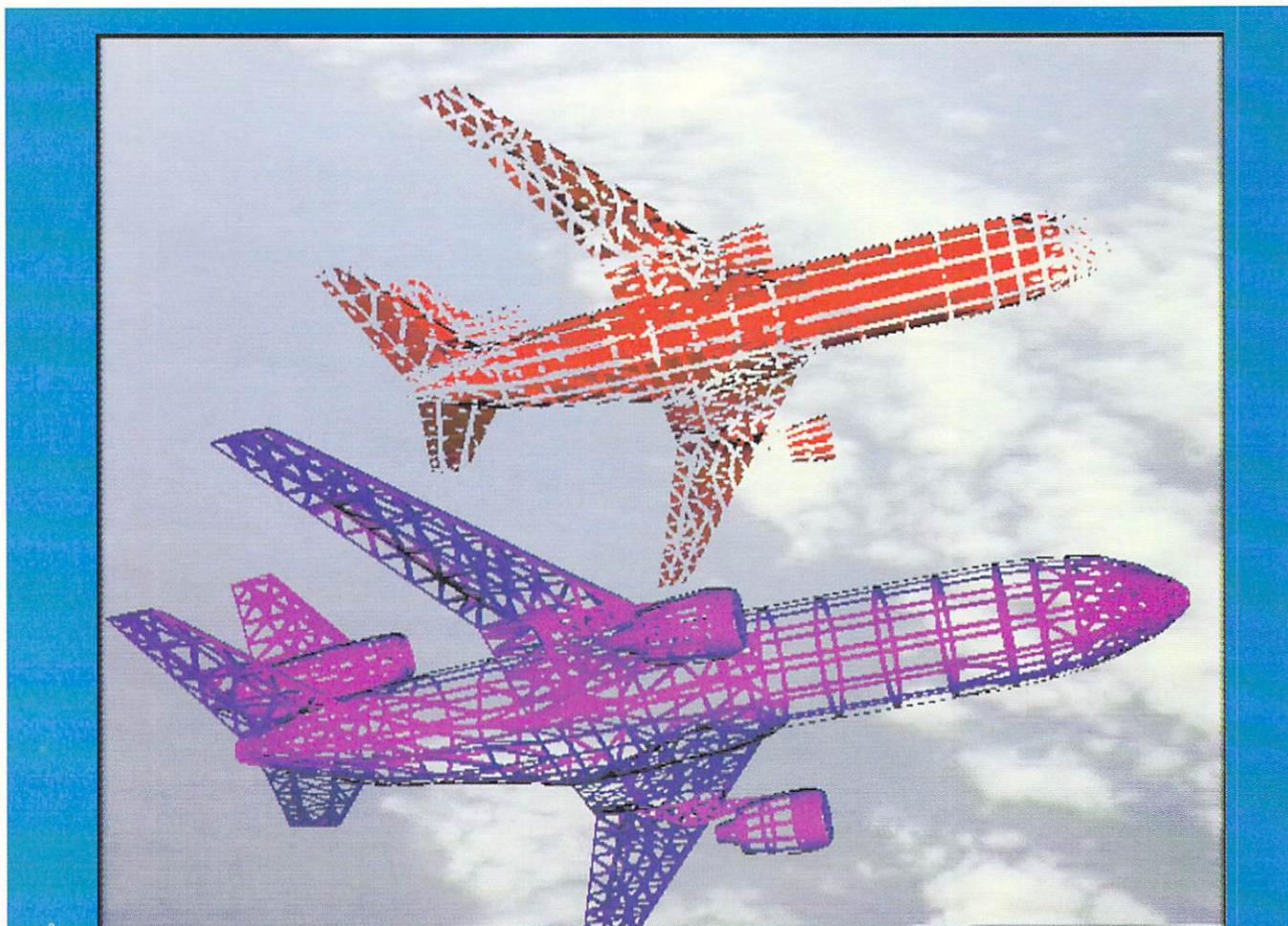
R. Shamms Mortier

end as many times as requested) and Periodic (runs the objects Attributes from beginning to end, then from end to beginning, as often as you request). The attributes that define the 3-D character of any object can be animated over time just as the object can. The default is obviously a "cycled" time of "1," since most objects in an animation would probably have the same look during the whole animation, but that need not be the case. When first applying Attributes to an object, you move to the third requester of the group by clicking on Member Control from the second requester.

The third requester is called the Member Control. It is from here that specific object attributes are determined and applied to your selected 3-D object. Since the step-by-step tutorial that follows has a good deal of space devoted to this third requester's use, we won't spend time here describing it in detail.

When you begin a project and have designed an object that is ready to receive some material attributes, you bring up the Attributes List which one-by-one opens these three requesters for input. When the Attributes are decided upon in the last requester (Member Control) of the AttList and you Accept the decisions you've made, you are marched through the same three requesters in reverse order, having to accept each in turn. This is so that you have an opportunity to alter each option. As you can imagine, a project that has dozens of objects on screen can have dozens of AttLists associated with it.

Basically, lists are descriptive information concerning objects and groups of objects that are somewhat independent of any specific object, since they can be saved and later applied to new objects in



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totally different animations. AttLists are really books in a special library dedicated to saving the "personality traits" that objects display, and which can later be applied to or "worn by" any 3-D object that comes along.

Tutorial Step One

After creating any simple object in A4D and selecting it, go to the Polygon menu option and select Attributes. Up pops a requester that has five options at the bottom, while a red string of text reads "No ATTLists" at the top. The five options are Add, Delete, Clone, Cleanup, and Control. There is also a button that reads Accept. Our first choice is to Add a list that will be connected to our chosen object, so click on Add, and watch as a listing is added that reads "AttList 1," which is also now highlighted in red. We could Delete this or any other AttList in the stack, Clone it, or Cleanup the listing. For now though, in order to proceed to our next plateau, let's just hit Control and move on.

Step Two

After hitting Control, we find our screen has popped another requester. This one is the AttList Control requester, and it has its own set of features. First, the AttList name appears at the top. This name can be edited (renamed) to your liking, and it is suggested that you do this.

At the bottom of the AttList Control requester is a Cycles indicator that shows how many times your AttList will be applied during an animation. The default is 1.0, but can be altered. If, for instance, it reads 3.5, then this AttList would be applied 3-1/2 times for the duration of your animated frames. As the side button shows, the cycles can be applied in a cyclic fashion during the animation, or

in a periodic way (meaning that the cycle will ping-pong from forward to backward during the animation). If you set the AttList to demand that the colors are to change from red to green and have the lower settings set at 3.5 and Periodic, and have the total animated frames set to 70, then for the first 35 frames the object will turn from red to green 3.5 times, then cycle backwards from green to red another 3.5 times before reaching the last frame. If you can't quite understand this, the best way to get a grasp on it is to experiment and take your own notes while watching what's going on. Hitting Member Control brings up the next requester in the AttList string.

Step Three: Member Control

All that we have done up to this point is to prepare ourselves for interacting with this third requester, because this is where the real action is. At the very top of the AttList Controller are three bars that control the way your objects attributes are animated. Every attribute that is targeted on any object can change over time. This means objects can change color, reflective capacity, response to wave sources, transparency, hardness, and any other present or future attribute that may be added along the way in A4D. The top animation bar is time sensitive, allowing you to set the overall time an animation is to address, and it's supported by two interactive slider areas below which allow you to set the initial and ending segments of the animation. There are two other supportive numerical input areas that allow you to set these parameters in either/or timing or frame units. In addition Easing in and out are supported, that is, speed increases and decreases as the animated object moves through space.

The type of Attribute animation, whether cycled through in one direction or periodically played from start to finish and then

Aladdin 4D 2.3 has arrived!

This upgrade is offered only to A4D registered users. To begin with, it's for math coprocessor users only, and will not run on unaccelerated machines. It comes with a clearly illustrated 18-page manual addendum. Considering its ingredients, you will want to send for it ASAP.

Version 2.3 has new procedural textures: eight tiles (Burst-Sine, Circles2, Fireworks, Radial, Spirals, Spirals-Sawtooth, Ripple1, and Ripple2) and a new Samples/Scalar variable for the Noise procedurals. These are all illustrated and tutorially explained. There is a new bitmap texture method called Tiles completely different from the A4D Shingles type. It can put multiple or partial images on each single polygon of an object. A new reporting feature prevents you from accidentally disabling a bitmap when you're not supposed to, preventing major problems.

It is now possible to load JPEG files directly into A4D. At this time, I don't know of any other Amiga 3-D/4-D programs that load JPEG directly. Imported Geo files (*VideoScape* ASCIIs) can now be scaled during import. Pains have also been taken to give A4D the expected full 3-D interface look. A4D Gas renders have been made more accurate and responsive to rotation commands, as well as

increased rendering 20 to 50. Another addition is full support for the new 24-bit Retina board, including saves.

Rendering can now be doubled on either or both the horizontal and vertical dimensions, or halved. Doubling increases rendering time, but gets rid of all jaggies as a result. Halving a render is good for previews.

Another Aladdin first is the new shadow acceleration routine. A4D now uses a technique similar to JPEG for ray tracing shadows, reducing their rendering time by factors of three or more! This is a lossy technique, meaning that if you select to push the rendering up too far, shadowed areas will be adversely effected. But you can easily get three to five times the speed on shadow renders without noticeably affecting the quality of the work at all, especially for animations.

An excellent two-volume tutorial tape is also offered, fully explaining many of the more esoteric features of A4D by Greg Gorby himself. In addition to the A4D visuals, the tapes will give you a chance to see the masters behind the curtain, Greg Gorby and his able assistant Devon Graham. The upgrade cost for 2.3 is \$39.95 plus S&H, and the cost of the tapes is \$54.95 plus S&H.

Here are the AttLists requesters associated with all of the tutorial steps presented in this article.

backwards, is set in this requester. One of the unique features in any animation program can also be turned on here by switching the BKGRD (background) on (default is off). A polygon targeted to this setting appears as an opaque section of the background graphic, becoming invisible to the viewer. But it is still a separate plane in reality, so objects passing through or around it seem as if they are magically appearing from the background. Backgrounds, in A4D or any other programs, are traditionally impossible to penetrate in this fashion as they are really not a part of the 3-D scene, but exist at an untouchable dimension in back of everything else. The only other way to utilize the background as an object is to paint it to a plane placed at some numerical distance in back of the scene, but then you have problems of placement and sizing.

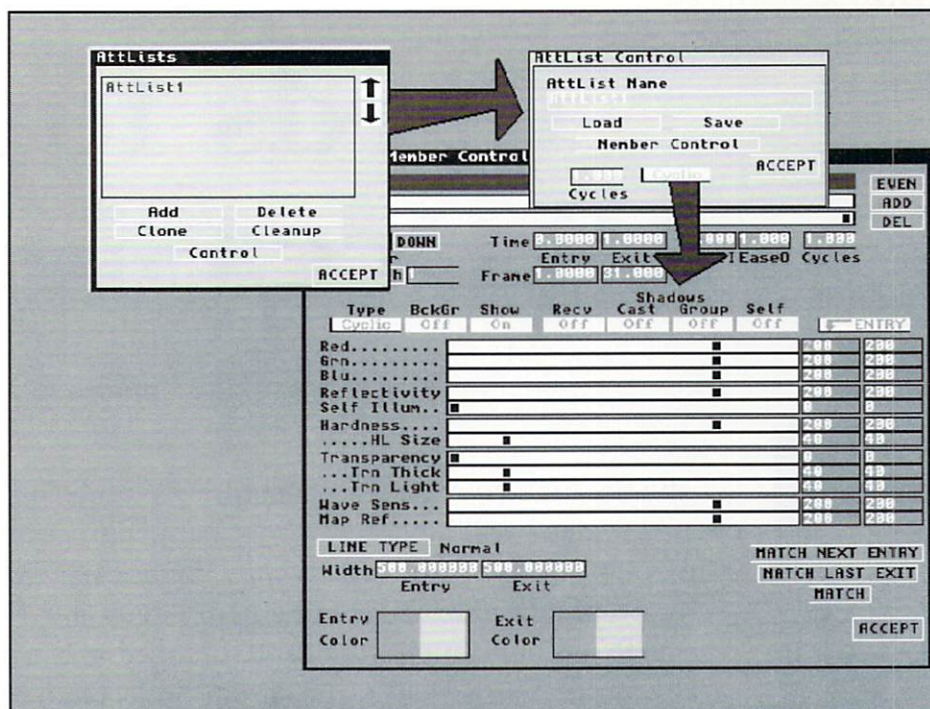
A list of interactive Attribute sliders is the heart of this requester. With them, color, material reflectivity (a object's ability to be self illuminating), the quality of its hardness, the size of the highlights it has when light plays upon it, the degree of its transparency and also the thickness and light sensitivity of that transparency, its sensitivity to wave sources and reflection mapping can all be experimented with in both visual-proportional and numerical terms.

Line Types

This feature cannot be found in any other 3-D/4-D program. It transforms a solid 3-D object into a composite skeletal 3-D structure. The user is in control over the type of structure involved and the thickness of its members. Five structure types include Normal (the expected 3-D object), Edges (the connecting edges of the object's polys), Centers (centers of polys), Points (points at which polys meet), and Point Centers. Use is easy. Select any poly in your scene, bring up the AttList requester, and go through these options selecting both type and size, then render.

Shadows

Once shadows are toggled on, they can be placed on objects in several ways. Any object can cast and/or receive a shadow. Another option is to toggle on the self shadow control, meaning that an object such as a bowl might cast a shadow on its internal concave shape as well as on the table it sits on. Shadows are completely



slaved to non-global light sources in terms of placement, intensity, and color, so light placement is critical to understand when working with shadowed surfaces.

But Most Importantly

The essence of the magic made possible in this requester is animation. Any of the qualities that a targeted object has can change over time. That might mean that a blue glass sphere gradually (or suddenly) achieves the look of a hard yellow plastic ball and then reverts to its transparent self again in an infinite mesmerizing loop. The object might show waves rippling across its surface in response to a wave source, and then be still and unaffected. Coupled with textural (see the first *Amazing A4D* tutorial) and deformation processes, altering an objects material attributes in A4D over the time of an animation is the third way to achieve dramatic and novel results.

When you're finished attaching various attributes to your object, the three AttList requesters are Accepted in reverse order. After previewing some rendered frames of your objects and scene, you can always go back and change or revise them by bringing up the same AttList requester again.

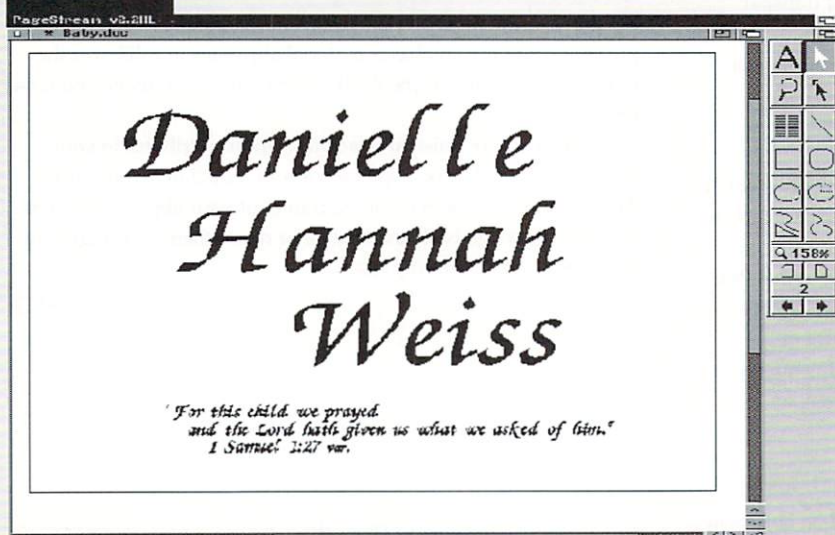
•AC•

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Cards for All Occasions!

by Dan Weiss

By the time you read this something wonderful will have happened to me: I will have a newborn baby in my arms. Truth to tell, I'm not much with knitting, so baby booties were out of the question. So in preparation for the coming of my daughter, I decided to design the birth announcement. The more I looked at the project, the more I realized that this is exactly the sort of project that readers of this column will be called on to do many times in their career. Sure it's easy to run down to the local card store and pick up a stack of announcements, but here is a chance to make a personal statement. And baby announcements are by no means a stand-alone project. Announcements of all kinds, for business gatherings, weddings, even birthday parties follow much the same process. So this month we roll up our sleeves and tackle the real-world problem of designing and implementing a birth announcement.



As a single project, the announcement has enabled us to look at many facets of publishing in a single issue as opposed to several. It provides a solid jumping-off point for the creation of business announcements and invitations.

Design for Reality

The first step is to design the project around the limitations of what we have available. To be sure, there are wonderful kits and supplies from specialty paper places that can be used as the basis of invitations. But in our case we want to look at what can be done with simple off-the-shelf supplies. To start off with we should think in terms of the 8.5" x 11" page. That's not to say that the announcements will be that big, but rather that's the amount of space we have to work with.

To image the file we will use a high-quality personal printer, in this case a laser printer, to create the camera-ready art. This artwork will then be reproduced using the local quick copy service to create two-sided invitations. While it can be cute to create individual personalized invitations using a word processor and its mail merge feature, the overall results are not equal to

the quality that we should expect. By using the quick copy shop, we gain the ability to create many announcements with minimal wear and tear on our equipment. Focusing in on the standard North

Quickly & Easily Create Your Own Invitations, Note Cards, Thank You's, & More!

American letter-sized page allows the greatest freedom, because it is the lowest common denominator of laser printers and quick copy shops.

Another reality check comes from the paper itself. While wedding invitations on heavy paper with a high rag content are very impressive, they just won't run through a photocopy machine. Realistically, the best we can expect is card stock at about 30 to 40 pounds. For the uninitiated, the weight of paper does not refer to the weight of a single sheet, or that of a small stack. The actual formula used is obscure at best. But to give you a frame of reference, the paper used in most photocopiers is 20-pound paper. So a rough feel for 40-pound stock is that it is a doubled sheet of photocopy paper.

Lastly we come to the envelopes. Standard letter envelopes don't really seem to "say" this envelope contains an announcement. To remedy this, we will use special invitation-sized envelopes, they are 4.375" by 5.75", just large enough to handle one quarter of a page.

What Do We Want?

The big question in any project of course is, just what do we want to produce? In the case of the baby announcements, all we are trying to send is a simple notice concerning our baby's birth. With other announcements we may need to include RSVP cards or other such miscellanea. But for now, let's focus on the basic baby announcement.

The Baby Announcement

As mentioned before, the envelope can handle an invitation that is one quarter the size of an 8.5" x 11" sheet of paper (4.25" x 5.5"). This means we can have a card that is 4.25" x 5.5", a piece of paper 5.5" x 8.5" folded in half, or a full 8.5" x 11" page folded in quarters. The project of creating an invitation out of a page folded in quarters is a great introduction to desktop publishing project, but something that we have moved beyond. For the baby invitations, we will use the 5.5" x 8.5" page folded in half. This gives us four 4.25" x 5.5" surfaces to work with. To visualize what we are doing, take a sheet of letter paper. Fold the top down to meet the bottom. Cut or tear the paper along this fold. Take one of the pieces and hold it so that it is taller than wide. Fold the top down to meet the bottom again. This is our invitation. For easy communication of where we are, write a one on the front flap. Open the invitation and write a two on the top part and a three on the bottom part. Finally close the invitation, flip it over, and write four on the back. Traditionally, the reader only expects there to be information on Panel 1 and Panel 3, but we can use the other spaces as well if we are creative.

For Panel 1, the front cover, let's experiment a little. We could lead off with a strong piece of clip art such as a teddy bear or a baby rattle. If we wanted to be more gender-specific, bowing, of course, to gender stereotyping, we could use a sports figure or a piece of sports equipment for a boy, and a ballerina or doll for a girl. To go with the clip art we could choose a gender neutral statement like "It's a baby," or the more traditional "It's a Boy/Girl." But as mentioned in the opening of the article, this is a chance to make a statement. For fans of trains, the image of a locomotive with the caption "Now arriving at the Weiss home..." can evoke a special feeling. The point is that traditional is fine, but if you are going to go to the trouble of making the announcements yourself, be creative.

In the case of my announcement, I shunned clip art in favor of using the simple beauty of my daughter's name. Keep in mind the

Although a birth
announcement is used
as an example,
these steps
can be applied
to cards
for any occasion.

audience of this announcement, namely people I had not spoken to recently, and the unfamiliar name would have added impact. With the traditional "It's a Boy/Girl!" type cover, all that is usually remembered is that the child was a boy/girl and was small/average/big. Leading with the name, recipients will be more likely to remember my daughter's first name.

To support the "image" of the name in a calligraphic script, Zapf Chancery Medium Italic, I captioned it with a *Bible* verse. I'd like to say that I have the knowledge of scholars and could mentally review the *Bible* and choose the needed reference, or that I used some high-tech CD-ROM *Bible* to find the verse. The truth is far



Gender
Date and Time of Birth
Weight and Height

Other relevant information may be what hospital, what day of the week, parent's names and possibly those of siblings.

For my announcement I lead off with "It's a Girl!" This is a clue to those recipients who may mistake "Danielle" for "Daniel." Next, I wanted to be able to send the announcements out ASAP after the birth, so I cheated a little. I simply left blanks, underlines actually, where the important informa-

more mundane and amusing. I called my mother, who is a bit of a Bible scholar, and said "I know there were a lot of Hannahs in the Old Testament: can you look a reference in the Bible that I can use for the baby announcements?" To which she instantly replied "I have the verse you want; it's 1 Samuel 1:27." To this date, no computer can take that vague a request and process it so quickly. Which is why computers will never replace my Mom, or any other kind of scholar.

Back to the invitation, though. I was debating on whether the front was too bare. Perhaps a clip art border would liven it up. But then I had to do one of the reality checks talked about in the beginning. As I was planning to use a laser printer to generate my original artwork, I couldn't get closer to .5" of any edge since one or more of the edges would not be printable. After moving in that much, any sort of border would consume more space than I had left to give. Clearly this is a case where pre-printed forms would have an advantage. Instead, I decided to use the dead space itself as the border and left the design as originally planned.

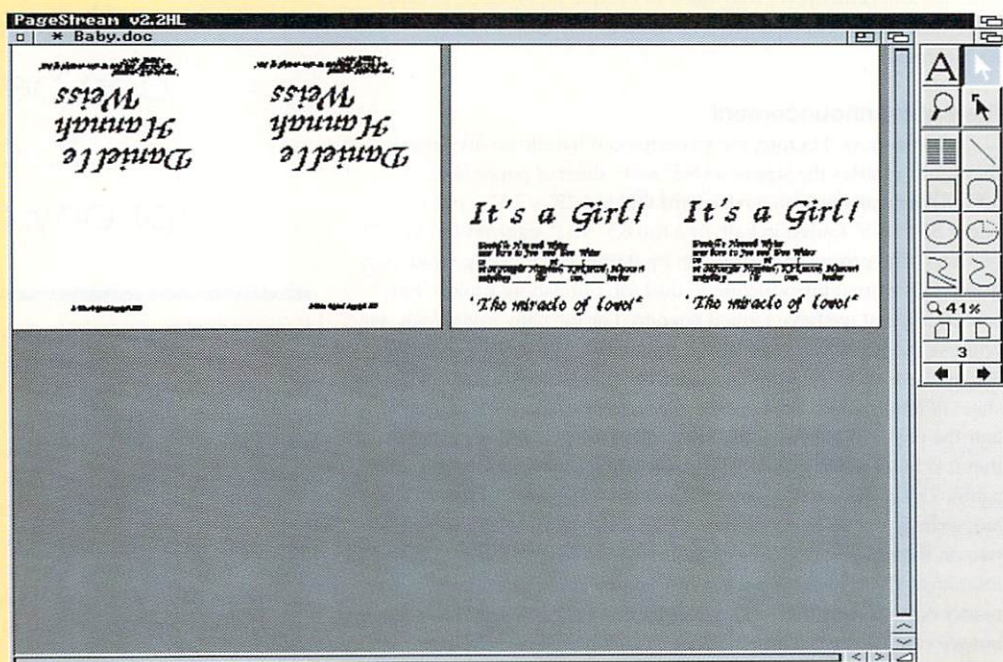
Content

Moving inside the announcement, flip to Panel 3. Here is where the body of the announcement lies. How you phrase the information comes back to your personal preference, but what you say is cast in stone. The particulars of any baby birth announcement are :

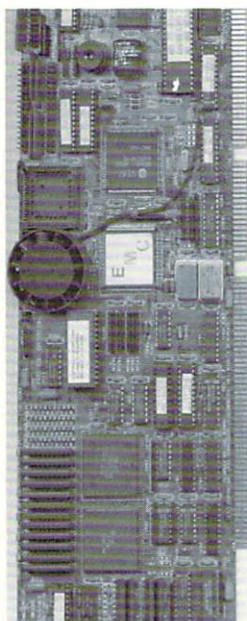
It is easy to create your own announcement cards. Doing it yourself will also save you money.

tion would go. This way I could fill them out at the hospital. Of course, if the baby was a boy, I was sunk plain and simple. Filling in the information by hand would seem to break the continuity of the text, but considering the chaos of the situation, it is not at all unacceptable. Obviously with a business announcement where there is more time to prepare, handwritten additions would be unacceptable.

After the body of information, I decided to conclude with another quote. This time I used the source of contemporary popular music lyrics and came up with "The Miracle of Love" from Queen's "The Miracle." This gave me a strong top and bottom to visually support the body text. The entire piece was set in Zaph Chancery Medium Italic with no text smaller than 12 points. It's amazing how small 12 points can look against 72 points as in the layout of Panel 1.



Getting a 486SLC BridgeBoard?



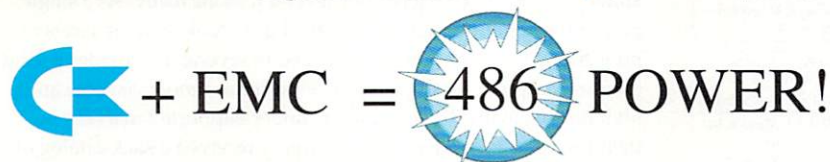
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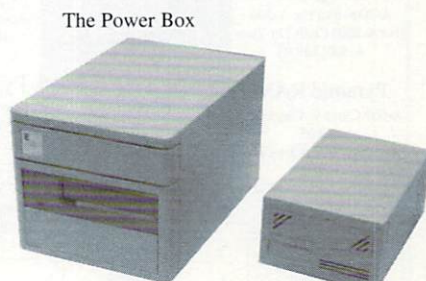
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Lastly, I wanted to "sign" my work. This is a vanity that is not well served in commercial work, but for a personal piece like this it is a chance to take pride in what you do. Turning to Panel 3, I placed a line of text at the bottom of the Panel: "A Weiss Original Copyright 1993." This, of course, has a double meaning. While the announcement was an original, my daughter will be as well.

A Letter Home

What about Panel 2? This is perhaps the most important panel. As mentioned earlier, my audience was made up of people I had not been keeping in close contact with. If I was going to let them know of my daughter's birth, why not take advantage of the opportunity and update them on what else is going on? Panel 2 then offers a space for me to add a personal note. I contemplated placing some text on the top of the Panel serving as a start for the letter, but decided against it. If I had placed some text, it would have boxed me into writing a letter to everyone, and would also have destroyed the balance of the page. This apparent separation of the type and handwriting is often used in direct mail campaigns to catch the reader's attention.

The Layout

As mentioned, the announcement takes up only half of a page, so what to do with the other half? Use it to make a second announcement. If you go back to the layout we discussed, you can view Panels 1 and 4 as one page and 2 and 3 as another. If we place two Panel 1s at the top of a page side by side, and two Panel 4s at

the bottom, we have the outside of the announcement. The problem is that if we place them both facing up then either Panel 1 or Panel 3 will be upside down in use. To remedy this rotate the layouts for Panel 1 by 180 degrees. When you are all set up, your pages should look like the layouts in Figure 3. Taking these to the printer allows us to create double-sided announcements easily.

The Envelope, Please

Now that we've examined the announcement, what about the envelope? We are restricted in that the envelopes don't feed through photocopiers well. If they did, we could design a playful cover that would visually cue the recipient as to the good news. Since we can't print the envelope, what are our options? Well, we can print the cover in a different way, via rubber stamp. By first designing it in on the computer and then having it converted into a rubber stamp, we can effectively transfer a DTP design to the front of the envelope. In the process we get to get away from simple black toner "ink" and interject a bit of color. This trick also works with business announcements. A rubber-stamped "Urgent" letter will often attract more interest than a plain envelope.

And Now ...

The question in your mind now may be, so why a baby announcement as a project? For several reasons really. As a single project the announcement has enabled us to look at many facets of publishing in a single issue as opposed to several. It provides a solid jumping off point for the creation of business announcements and invitations. Finally, there is a huge, under-supported market out there for these announcements. I recently received a slick catalog of available announcements. When all was said and done, the 16-page catalog did not seem to offer more than about five variations on a very simple set of themes. There were only 15 typefaces available to choose from and the prices were quite high. I submit that any regular reader of this column could out-perform this company. Which just goes to show that there is money in desktop publishing.

Afterword

A quick final note. I am starting to receive feedback and sample work from readers of my articles. Many are encouraged and believe that they can now handle desktop publishing, and have taken on many new and exciting projects. My advice to those of you that are holding back is to get going. Don't sit on the sidelines anymore, get into it. Start off simply by creating things for your own use, then branch out. One reader takes examples of what she feels is lousy work and reworks them as practice. It's a great idea, and one I encourage others to try.

•AC•

Please Write to:
 Dan Weiss
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Head to Head

Pixel 3D Professional vs. Interchange Plus

**A
feature-by-
feature look
at the leading
Amiga
object format
translation
packages**

by R. Shamms Mortier

Interchange Plus and *Pixel 3D Professional* are the leading Amiga 3-D object format translation packages. Each offers a variety of features and performs its tasks equally well. This article outlines the features of the two products and takes note of functions specific to each product.

Pixel3D Professional

With loads of features, Pixel 3D Pro (PixPro for short) has hit the ground running. PixPro needs 1MB of Chip RAM to run. It installs easily on a hard drive, is not copy-protected, and comes with a 48-page manual. It comes with some tutorial graphics for experimentation, and does not multitask.

Object loads and saves

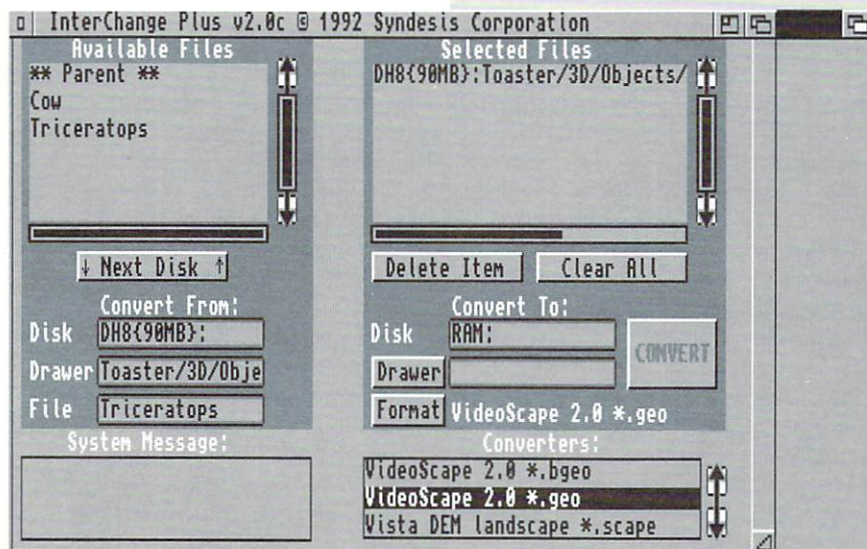
PixPro now loads the following formats: *LightWave*, *3DPro*, *Turbo Silver*, *DXF* *AutoCAD*, *Wavefront*, *Digital Arts*, *Videoscape Binary* and *ASCII*, *Imagine*, *Sculpt 3D*, *Draw-4D* and *Pro*, *Caligari*, and *Vista Pro* and *Scenery Animator* DEMs. It saves all but the DEM files.

Also added is a save in a special PixPro "Router Bit" format. Router Bit applications are special cases of the beveling function, with the addition of allowing the user to import and save any polygon as a Router Bit. This

continues PR3D's move towards being a "generic modeler" as well as an Object File Translator. Once created in a paint program and imported, simple polys are saved to a Router Bit file where they can be used later to apply unique bevels to a selected object, usually a text object or a logo. With a special Phong mode, the bevel itself can later be Phong shaded in a renderer, while the edges where the routed edge meet the object will remain sharp. You can select either or both the front and back of an object to be Router beveled. Both the inset and height of the bevel can be interactively altered.

Bit Map conversion to a 3-D object is PixPro's central area of use. Its speed has

The InterChange-Plus interface is simple in design and easy to understand

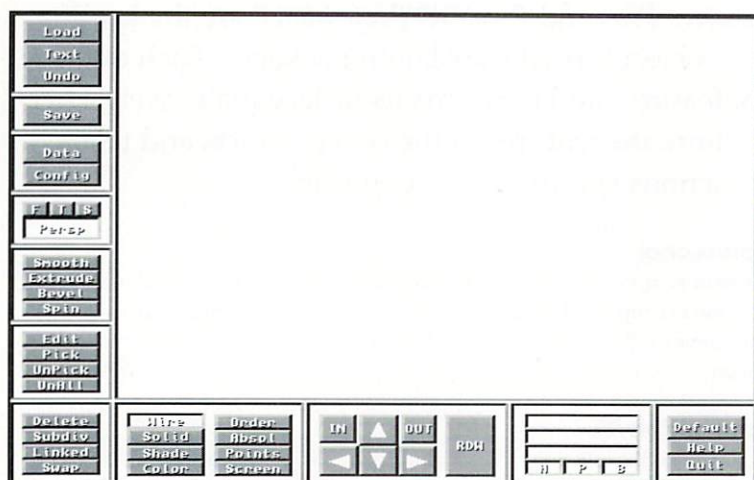


increased at least two times over its 2.0 release. When my PixPro package arrived, I used it immediately to address a deadline. I had scanned in a logo from a background set I designed for instructional television, and a computer graphic animation's last frame was going to be faded into that set. Edges of both the animation frame and the live set the logo was taken from had to match exactly. Scans often result in rather poor aliasing, and the resulting jaggies ruin any visual. So I used PixPro's special smoothing algorithm on the imported scan. The operation was fast and exacting, and the jaggies were all but gone. I then used this scan to extrude the logo, and plugged it into the animation. Quite a number of data points were added to my object, but the rendering results were impressive.

3-D from 2-D

All of PixPro's operations are accomplished on a visual interface, much like that in the best Amiga 3-D/4-D programs. Movement of all objects is mouse-interactive, so that you can see any of the planes that have been manipulated before you save the results.

After 2-D artwork is imported into PixPro, there are two basic ways to turn it into a 3-D object. The first is to extrude it, that is, to



The interface for Pixel 3D Professional has been completely redesigned to give it more of a Workbench 2.x look and feel.

give it depth along the Z plane. PixPro also allows you to alter the dimensions of the depth as it moves (X and Y skewing), so that extruded surfaces can be either larger or smaller than the objects face, as well as the default of remaining the same size. The saved out colors of the Extruded section, front, side, and back of the object can be altered from a 32-color list.

Spinning or lathing is the second way to create a 3-D object from a 2-D surface. A special Spin Settings requester pops up on the screen. The most important settings here are the ones that determine the "spin" axis. PixPro allows you to choose the X-, the Y-, and the Z-axis positions in any of three varieties: left/right and/or top/bottom and middle of each axis. A special "axis offset" feature allows all axis settings to be altered on a pixel-by-pixel basis. Different objects result when the spin axis is altered. The start/stop degree of the lathing is next to be set. Lathing a 2-D object 180 degrees instead of 360 for instance creates an object with a semi-circular face. The "depth" of the spin in all axis can also be altered. Because PixPro contains these graphics tools as well as its library of object format translators, it may also be used by the beginning Amiga artist to experiment with 3-D techniques before purchasing a more expensive 3-D program that will render the results.

The Data Requester

Every object drawn on the PixPro screen stores its data settings and info in a Data requester, allowing you to numerically alter and manipulate that data as you render wireframes or shaded representations on the screen. Here is where a little knowledge concerning the different 3-D formats can save you time and increase the efficiency of later renderings. For instance, some of the 3-D objects created in certain Amiga 3-D programs use only triangular polys, and other programs demand other additional poly info before rendering can take place. As all of these transformations can be targeted in the associated Data Requester, it would be very helpful if PixPro's manual provided more background data on the various 3-D object formats it addresses. Polygon Flipping, for instance, attempts to re-rotate all polys in a clockwise order, something LightWave, Videoscape, and 3D Pro demand. Polygon Division makes all polys three sided by splitting those with more than three sides, and some Amiga 3-D renderers demand triangular faces on the polys. Polygon Doubling is an alternate way to achieve objects that LightWave and other renderers can digest and render. Polygon Reduction rebuilds polys on the same plane. Vertices (Point) Reduction reduces proximate vertices and points through user input. Each poly can be selected and have its colors adjusted. Other manipulations can be addressed as well.

Special Elevation Maps

PixPro allows you to import a painting produced in a paint program with color "intensity" (relative brightness) in mind, so a 3-D "bump map" of the image can be created. Some dedicated tutorials would be helpful here to develop this idea further. The manual suggests that brushes are more beneficial than screens to import in this mode, in order to control the size of the images.

More Attributes of PixPro

There are four default buttons that can be set to operate on all images and text that is loaded in for manipulation. They target Smoothing, Extruding, Beveling, and Spinning. This makes it easy to redesign images, or develop libraries of unified logo treatments. Any and all configurations in PixPro can be saved and loaded back later. A full list of the operations can be started from keyboard hotkeys as well as specific menu selections. There is a one-level undo function included. A multiple-level undo function would be more helpful, since the program is so creatively feature thick.

Edit Mode

PixPro's Edit mode offers the user ways to refine the 3-D object that are precise and exacting, so that when it is exported to the targeted rendering platform, it's set to be processed. The View Window is where most of the PixPro editing takes place though various menu selections allow numerical editing as well. Editing requires that you leave the default perspective mode in trade for a front, top, or side view. The object appears as either a wireframe or a wireframe with points. Test renderings are done in Perspective mode.

PixPro's editing functions are handled by eight dedicated actions. In Edit mode you can select and move any points on an object, including "magnetic" moves where a group of points is moved in a specific direction. "Pick" gives you the power to choose any number of points at the same time, while UnPick does the opposite. If you want to select all of the points on a specific polygon, use the Linked operation. UnAll deselects all selected points on

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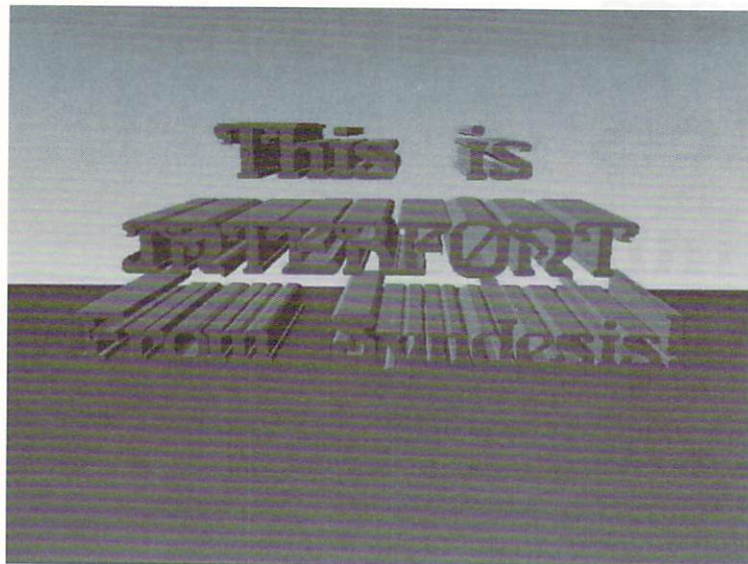
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screen. Points may be removed from the object with the Delete function. Subdivide adds a point between two selected ones, thereby giving you specific control over edge smoothing operations. Swap is the final operation to be mentioned, swapping selected with unselected points on the object. With all of these editing tools, you can fine tune your object before it heads out to a specific library.

The suggested list price of PixPro is \$249, with an \$85 upgrade cost to previous users.



InterChange-plus 2.0

InterChange was the first of its kind on the Amiga market. Long before the visual interface of Pixel 3D from Axiom software hit the shelves, *InterChange* was making a mark among Amiga artists and animators. *InterChange* has always been a non-graphic interface product, that is, you can't see the object files you import for translation. Many Amiga artists and animators trust the Syndesis name and know that when the numbers stop running, their object has been successfully transmuted to the chosen format.

InterChange-plus has no Caligari converter, but does address other unique object file formats that Pixel 3D does not. *InterChange* also has a huge library of primitive type faces, ready to extrude and export. *InterChange* has a far more inclusive manual than Pixel 3D, including in depth documentation on how all of its included file formats are constructed, and how to take advantage of this information during the conversion process. *InterChange* also automates the problem of axis orientation by always addressing the targeted format, caused by the way different formats name the XYZ-axis.

You should also know that *InterChange* has the capacity to load whole scenes of objects (LightWave, Sculpt, etc.), and to preserve the color, specularity, and other data in the files it converts. This is an attribute not contained in PixPro. Some Amiga artists and animators may find this capacity very alluring.

If it's special converters that lure you into purchasing one or the other program, then obviously you will peruse this list for the converters important to you.

PageRender-3D

A couple of years ago, Mindware International of Canada was hyping a superlative 3-D program called *PageRender-3D* with full-

page color ads in all the Amiga trade magazines. It did things no other Amiga 3-Dware since then has been able to accomplish. It ended its life at version 1.3, and Mindware literally disappeared from the perceivable universe overnight. One of the tricks PR3D did was to generate various "arrays." Arrays are mathematical groupings of an object, matrices that have so many objects on the X-axis, so many on the Y, and so many on the Z (all user definable, including the "distance" between pairs).

InterChange-plus comes with a 23-2-D vector fonts library called "InterFonts." These are all different font families, and cover most of the design needs that any Amiga videographer could desire from serif to sans-serif to fancy designs (and bold, italic, and other style parameters may be added as well). Loading the *InterFonts* is just as easy as loading a 3-D object file, and *InterChange* boasts an "add text" interface that I wish other developers would study. *InterChange* allows you to write five lines of centered or justified text in the chosen font. Then, by altering the numeric values in the extrude and other settings, it generates the 3-D text object in your chosen object format.

InterFonts may display specific surface attributes like dull, shiny, mirror, glass, and wireframe. Some targeted savers however, may not use these surfaces. Each line in the text can have a different height as well as different extruded depths from .001 to 2000. There is a special "backsides" selector which either gives the text objects solid or hollow backs. All settings may be saved and loaded again. All text may have a "smoothness" value in a range from 1 to 15.

InterChange Plus

In the illustrations that accompany this article, I have attempted to give you a few visual examples of how powerful both Pixel 3D Professional and *InterChange-plus* are. It is my advice that any Amiga professional graphics person think about adding both Pixel-3D and *InterChange-plus* to their library if at all possible, because each addresses different formats and has special tools and/or libraries. Besides the specific converters that you might need in your Amiga work, you might want to add *InterChange-plus* for its depth of object translation and its excellent font capabilities. The suggested list price of *Interfont Plus* is \$99.95 with an upgrade cost to previous users of \$50.00.

•AC•

Pixel 3D Professional
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Bloomington, MN 55420
(612) 888-0352
Inquiry #225

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Summer CES 1993

The Video Toaster 4000, AmiLink Professional, Psygnosis, and more, highlight the Chicago event.

The Summer Consumer Electronics Show in Chicago, IL. (June 3 to 6) attracted over 50,000 buyers, press, and other trade personnel on the first three days of the event which were reserved for trade only and over 37,000 consumers for the open event on Sunday, June 6. This edition of CES included several special pavilions, including Multimedia, Personal Video, CD-ROM, HomeOffice Computing, and Home Office Automation and Security.

NewTek

The North Convention center appeared to be the best attended portion of the show with NewTek's Video Toaster 4000 booth sitting like a jewel as the first booth in the hall in the section dedicated to personal video. The crowds surrounding the booth were watching the almost non-stop demonstrations of NewTek's new Video Toaster 4000.

This smart, new upgrade of their current video system not only enhances the abilities of the older toaster with new features and effects, but comes with an update to *LightWave 3D*. The new *LightWave* allows users to see their animations in real time in HAM mode as well as take advantage of the 4000's AGA chip set.

Although the Video Toaster 4000 was demonstrated at NAB (see the article in the July issue of AC), the general consumer day on Sunday became the first time the Toaster 4000 was demonstrated to the open market. NewTek's Donetta Colboch, director of marketing, was quoted in a CES letter, "We feel that we are laying the groundwork for the future. The crowds have been great, the reception for our product has been great. This is really the first opportunity for people to be exposed to our product and to see it in action. The CES is consumer oriented and the attendees are looking for the technology for consumers and pro-sumers."

NewTek Vice President Paul Montgomery stated, "NewTek's goal has always been to

create a broadcast-quality video production tool at a price everyone could afford. The original Toaster stunned the Video industry, attracted thousands upon thousands of people who were looking for a low-cost video production solution. The Toaster 4000, with its powerful new capabilities and lower price, is the next step in the personal video production revolution."

Tim Jenison, NewTek's President, also stated, "The Video Toaster 4000 is designed to utilize the increased capabilities of the Commodore 4000 computer. This powerful combination of new technologies has resulted in hundreds of new features in the Toaster 4000, many of which have never been available before on any video system at any price."

On *LightWave 3D*, Paul Montgomery went on to state, "We designed it to have all of the power and functionality of a \$30,000 animation workstation, but maintained the biggest strength of the Toaster—namely, it's easy to use."

Currently *LightWave 3D* is being used by top animators and special effects artists in Hollywood. NewTek has not only gained credit for *Babylon 5* (March issue of AC) and *Unsolved Mysteries*, but the Toaster 4000 is currently being used to create 3-D graphic effects for Steven Spielberg's new series *SeaQuest DSV* to air this fall on NBC. Private screenings of some of the special underwater animations and effects were given during the show.

This was the first major event which demonstrated Commodore's and NewTek's joint agreement at marketing the Toaster and the Amiga. With NewTek doing the major play, Commodore executives were quietly meeting with corporate executives in a small office on the main show floor. While this was a departure from CBM's Winter CES open booth, it was a return to the Summer CES. CBM opted to sit out last year's CES because it was open to the Public for one day. This year, CBM handled the problem by obtaining private office space to the side of the show and holding closed-door meetings with selected CES attendees.

Gold Disk & RGB

Also located in the Personal Video Pavilion was Gold Disk with the *Video Director* for the Amiga and Windows. This unique system offers simple on-screen control of your CamCorder and VCR. *Video Director* users may log and catalog individual film clips and create multiple clip libraries where the Amiga, not the user, keeps track of film clips, tapes, and sections for full editing convenience. This allows an almost seamless capability of creating fully edited production.

RGB Computer & Video, Inc. was also on hand to demonstrate their latest improvements

to the AmiLink video editor. With the introduction of the Video Toaster 4000 by NewTek, RGB has redesigned AmiLink to introduce the AmiLink VT4000™. The VT4000 creates a seamless integration between the Toaster 4000 and your editing tools. The Toaster 4000 post production tools are controlled and automated from the AmiLink VT4000 interface which resembles the Toaster 4000 interface by following the same user interface guidelines. AmiLink's clearly labeled function buttons allow easy recognition and control of Toaster Digital Effects, the new Toaster Character Generator, Toaster ChromaFX video filters, Toaster Linear Keyer, and all three of the Toaster Digital Video buffers.

The AmiLink VT4000 runs on the Video Toaster 4000 without a second computer. It can handle sixteen VTRs and four record decks. It has advanced Match-Frame capabilities with six forms of Match Frame edits and reads VITC and LTC SMPTE/EBU time code for zero-frame accuracy. With support for synchronization with *Bars&Pipes* and Studio 16 audio systems and more, AmiLink VT4000 is a "must see" for any Video Toaster 4000 user.

RGB also introduced the AmiLink CIP™ Personal Video Editor™ which has been promoted as a device that can be used by anyone—"small independent producer to the seasoned post-production veteran." AmiLink CIP gives all levels of videographer users control of a wide range of commercially available equipment. The AmiLink CIP is also fully upgradeable to the professional level AmiLink products. Incorporating individual device features such as the SONY RC Time-Code on some SONY products, AmiLink CIP offers flexibility and advanced features to a wide range of user-designed systems.

AmiLink CIP includes all the functionality of the professional model. You may add audio mixers, the POD (Jog/Shuttle console), additional switchers, as well as any peripheral supported through AmiLink. This new upgrade allows AmiLink CIP to control an expanded number of devices. While the professional versions of AmiLink allow frame-accurate control of more advanced video decks and other equipment, AmiLink CIP controls industrial grade equipment so the average user can generate post-production product with ease and confidence. AmiLink VT4000 and AmiLink CIP are available from RGB Computer & Video Inc., 4152 Blue Heron Blvd. #118, Riviera Beach, FL 33404 (407-844-3348, FAX: 407-844-3699).

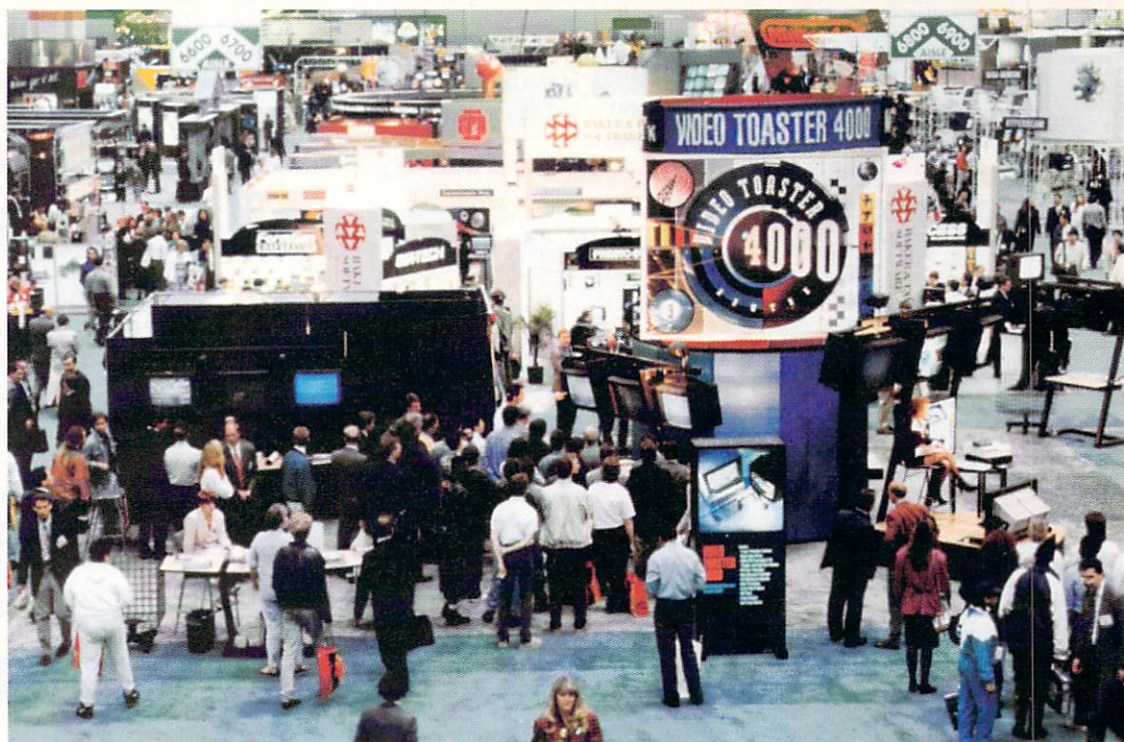
SNASM

Although Cross Products Ltd. was not an exhibitor at CES, several corporate executives made the trip from England to discuss their SNASM development system for the Amiga



DinoFrenzy: Both Sega and 3DO have licensed products based on Jurassic Park.

Front and Center: The North hall in the McCormick center was one of the busiest spots in CES. In an area traditionally reserved for the latest new game developers, NewTek dominated with non-stop demonstrations of the Video Toaster 4000.



and other platforms. SNASM offers professional development systems for the A500 (connected to the A500 expansion port) and the A600/A1200 with a PCMCIA port that leaves the expansion ports available for other devices. SNASM allows full control of the computer to create products with complete use of the full memory of the computer and allows the computer to boot as normal. When the machine is booted into the operating system, an OS legal debugging stub can be run to permit remote development and debugging of products while co-existing with the operating system and the use of intuition etc.

Since the SNASM development system resides on a PC and is connected to the Amiga as described above, cross platform production is greatly enhanced. The time required to de-

velop Amiga software can be amortized with the development of Genesis, SNES, and Mega CD console. All systems will benefit from Cross Products newest introduction, SNASM 2. SNASM 2 is a new 32-bit system which allows debugging of multiple targets on-screen simultaneously. SNASM 2 also offers an advanced interface with menus and multiple windows. Both SNASM systems are available from Cross Platforms Ltd., The Calls, Leeds, West Yorkshire LS27EH, England (0532 429814, FAX 0532 426163).

Atari and IBM

Atari used SCES to introduce their new 64-bit game machine, the Jaguar. The Jaguar is an interactive multi-media system based on an Atari-designed proprietary 64-bit RISC processor. The Jaguar will feature 16 million colors in 24-bit color graphics. The promised hardware will provide shaded 3-D polygons which can be manipulated in real time. Jaguar will also perform real time texture mapping and special video effects. With a proprietary Digital Signal Processor for audio, a double-speed compact disk peripheral to play audio CD, CD+G, and Kodak's new Photo-CD®, a list of 3-D titles in development, and a \$200 introductory price, the Jaguar is attracting the attention of industry insiders. This has already been evident with IBM who, in a joint announcement with Atari after CES, stated that IBM would help produce the low-cost hardware. Introductions are planned for San Francisco

and New York this fall with full national distribution in 1994.

Game Issues

Merit Software announced the second *Tom Landry Strategy Football* game to be released by September. *Tom Landry Strategy Football—Deluxe Edition* will retail for \$49.95 with a long list of enhancements suggested by players. Landry—Deluxe offers fans complete editing control over all players. New offensive formations include Power I (left and right), "Blue," "Trips," and Shotgun with four wide receivers. With a league editor, complete team editing, and the ability to select a team members name and attributes, the new Landry Football user will have a great many opportunities—just as in a real football game. Merit Software is at 13707 Gamma Road, Dallas, TX 75244 (214 385 2353, FAX: 214 395 8205).

Psygnosis came to CES with a new owner. The major game developer, who created the very popular *Lemmings*, announced that it had been purchased by Sony. No information was available as to the purchase price, however Psygnosis employees seemed to be extremely pleased with the opportunity.

The new ownership will not slow down the release of several new games for the Amiga. *Hired Guns*, the massive multiple player, action, role-playing game will be released in September at \$59.95. *Combat Air Patrol*, a fast-action aircraft simulation which can be used solo or linked to another Amiga, will be released by August at \$49.95. *Combat Air Patrol* also offers multiple views, authentic sound effects, pre-mission reconnaissance photos, and more. *Walker*, the highly awaited 3-D realistic Walker battle game will be available this fall at \$49.95. These will join the *Lemmings* sequel, *Lemmings 2: The Tribes* (\$59.99) which is currently being released.

•AC•



While 3DO (Left Top) and Phillips CD-I (Left Bottom) created a show of force, CBM opted for a quiet closed office on the show floor.



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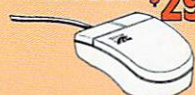
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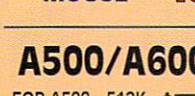


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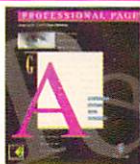
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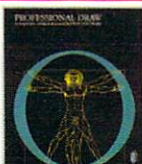


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From Your Structured Drawing Program

by Dan Weiss

When I was a kid I had a SpiroGraph™ set. It was full of little plastic gears and rings that allowed me to draw interesting designs. The set also came with four colored pens that allowed me to create colorful versions of these designs. Best of all it came with a “recipe” book that explained how to make the really neat designs.

The problem was that I could never get it to work like the book. I’d slip out of the ring, the pen would gum up, the paper would slip or I would just plain do it wrong. I loved the designs, but it was just too much trouble. Recently though I had a chance to recreate those designs with the new drawing program *Art Expression*. *Art Expression* incorporates a function called Transform that allows you to duplicate an object while rotating, scaling and moving it. *Art Expression* also has a tool that makes regular polygons—polygons

with equally spaced sides—that combines well with the Transform function to recreate those old designs. Add to all this the advantages that you don’t have to be dexterous, have many more colors to choose from, and can play with a design without tiring, and have a diversion for adults and children alike.

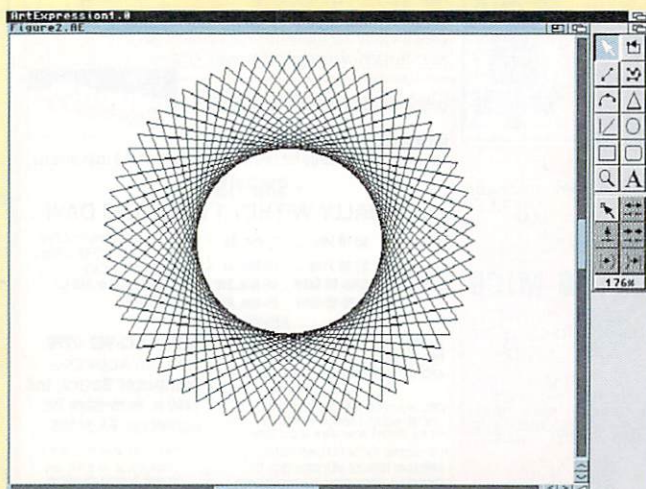
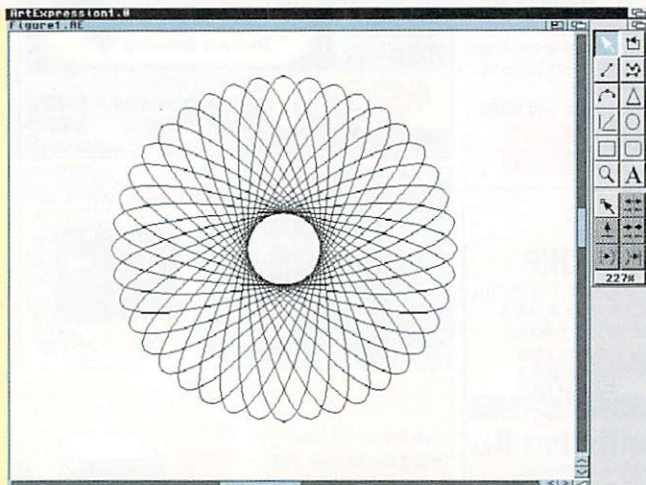
To help out in your exploration of what’s possible, we will look at the underlying ideas as well as the “recipes” for creating the designs. So let’s start with the Transform function.

Transform

Start off by drawing an oval that is about five times as wide as it is tall. Select it and choose Transform from the Effects menu. Enter 19 for the Repeat Number, 0 for both Move boxes, 100 for both Scale boxes and 9 for Rotate. Hit OK. Presto, you’ve just created your first design. This design was the only one I could ever do with the old manual tools. (Figure 1)

Some important notes about what these numbers mean. The Rotate number is the most important, and comes from dividing the 360 degrees in a circle into the number of steps you want. In this case I wanted 40 steps. To get the rotate angle, divide 360 by 40 and get 9. Since we are rotating the oval around its center, we need to cut the number of steps in half, as both halves of the oval look the same. Then we need to subtract one more, since the program leaves behind the original oval we started with. So 40 divided by 2 minus one is 19. If we used a larger Repeat Number, the ovals would stack on top of each other. If we used a smaller number, there would be a gap. Sometimes playing with the number of steps can yield interesting results.

Let’s try the same thing again, but with a Triangle drawn with the regular polygon tool. The regular Polygon tool is the one in the toolbox that looks like a triangle. Hold down the shift key when you first click on it, and this will bring up the control requester for the tool. Right now we want a triangle, so select that and click OK. Now the tool will draw triangles when you use it. When drawing with this tool, you will get a circle until you let up, and then it will draw the polygon in the space where the circle was. Play around with it a bit, then draw a triangle about four inches tall and wide. This time the number of sides that are the same are 3 (the three points of the triangle) so we use the same formula, 360 divided by 5 degrees divided by 3 sides then minus one gives 23. This is the number of



Figures 1 & 2.

steps we should use. Try it out. Now try it again with only 15 steps. This is a case where the incomplete design is also very attractive. (Figure 2)

The same formula can be used for hexagons (5 steps 10 degrees), rectangles (8 steps 10 degrees) and any other regular polygon. You will notice that as the number of sides increases the "thickness" of the design decreases, and the inside space gets bigger. This is so because the polygon becomes a closer and closer approximation of a circle.

Add Some Color

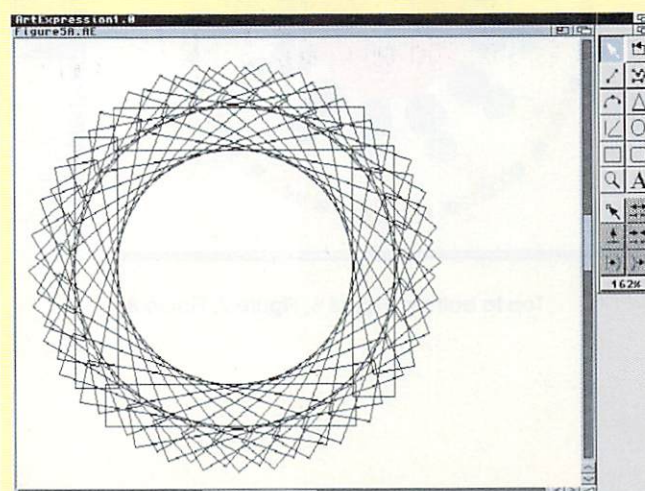
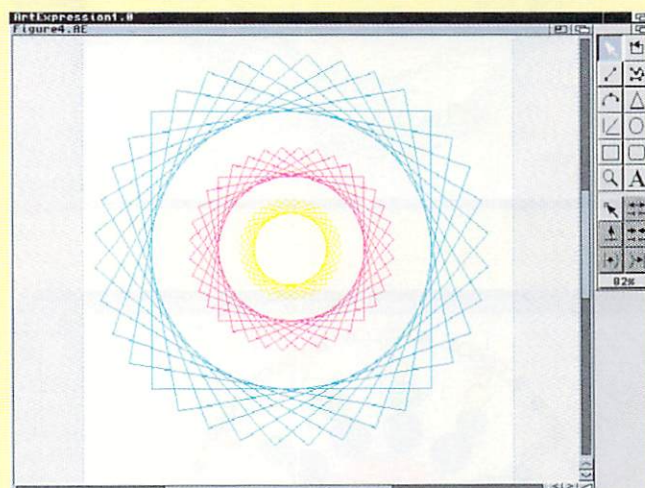
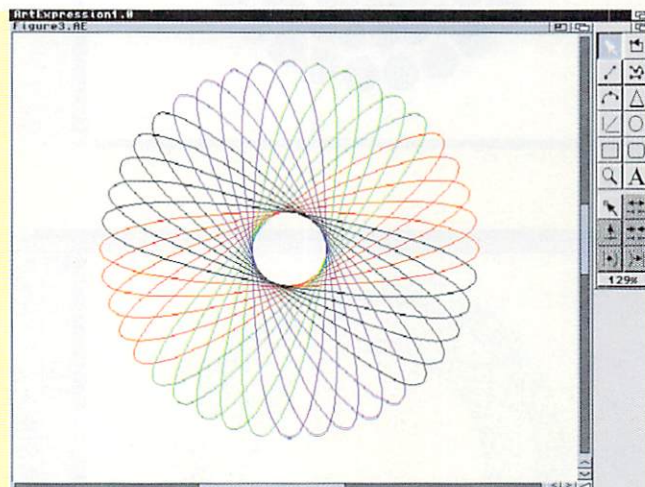
Simply doing these in black is a shame on a computer like the Amiga. Next time before starting a design, change the color of the line of the object. This makes the entire design the new color. Let's take it one step further, let's color the steps of the design. Start with the oval in the first example. Color it red. Set the Repeat Number to five and the Rotate angle to 9, and hit OK. Next select the last oval drawn, and change its color to green. Repeat the transform; the numbers are the same, so don't change anything. Select the last drawn oval again, and change it to blue. Transform again. Finally select the last oval drawn, change its color to black. Select transform and change the repeat number to 4. This brings our total to the original 19 we used the last time. Hit OK, and look at the new colorful design. (Figure 3)

More Objects, More Fun

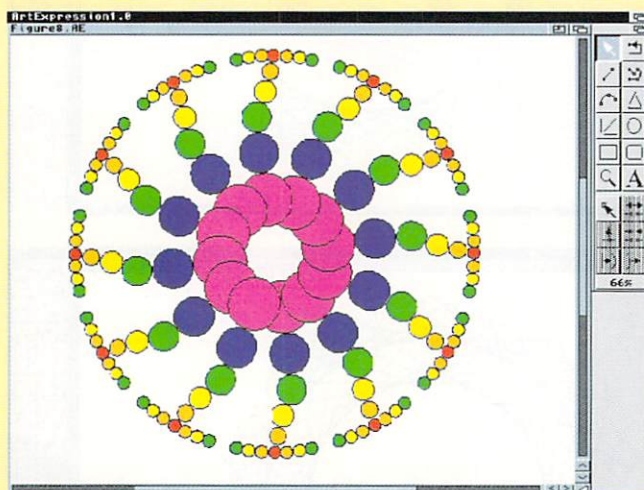
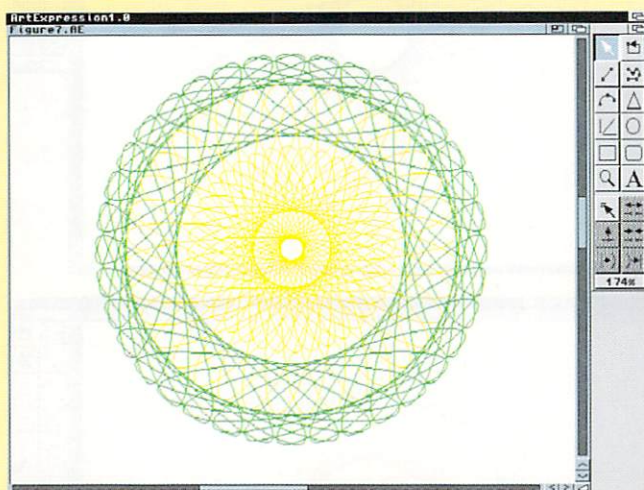
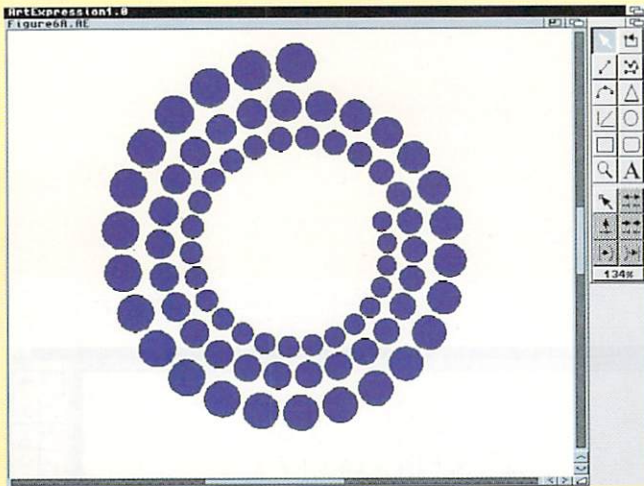
Let's try the same designs, but with multiple objects. Draw three squares, each about half the size of the previous one. Use the Align tool from the Object menu to align on the centers both horizontally and vertically. After they are aligned, set each rectangle to a different line color. Select all three rectangles and group them using the Group command in the Object menu. Finally, use Transform and set the Repeat Number to 8 and the Rotate angle to 10. As you can see the results can be spectacular. The more objects you group together, the richer the results. (Figure 4)

Set the Point

Another trick that creates unusual designs is changing the rotation point. Normally when an object rotates, it spins about its center. But Art Expression allows you to set the point that is used for rotation of the object. To show this effect in action, draw a rectangle that is about five times as wide as it is tall. Select Set Rotation Point from the Effects menu. This will give you a crosshairs to set the rotation point with. Click down the rotation point at about the middle of the rectangle, but one inch below it. If you notice, there is now a little blue X below the rectangle when it is selected; this is the rotation point. Now select Transform and try these numbers; Repeat



Top to bottom: Figure 3, Figure 4, Figure 5.



Top to bottom: Figure 6, Figure 7, Figure 8.

Number 35 and Rotate 10. The reason for such a high repeat number is that the object is no longer spinning about its center and "repeating" it self. You can also see that with the rotation point changes, the pattern is different from when rotating about the center. Let's play with the rectangle some more. Move the rotation point so that it is to the right of the rectangle by about an inch, but in the middle vertically. Use the same numbers in Transform. The result is a much bigger design that somewhat resembles a flower. To heighten the effect, select all of the rectangles in the design and set the fill to a solid yellow. (Figure 5)

Scaling Transform

Lets get back to the Transform feature now. Two of the boxes we skipped over are the Scale boxes. The left hand box sets the X scale, and the right hand one sets the Y scale. Most of the time you will use them together so it doesn't really matter. Start off by drawing a circle about and half an inch around. Next set the rotation point about an two inches below it. Fill the circle with blue. Select transform and set the Repeat Number to 72 and the Rotate angle to 14. Now before you click OK, set the Scale to 99 and 99. Now click OK. You've just created a perfect spiral. Try it again, but with the Scale set to 98 and 98. It's amazing how much just one percent scaling can change the design. (Figure 6)

Dissimilar Groups

Another way to get unusual designs is to combine objects that are at odds with each other. To try this, draw an oval that is five times as wide as it is tall. Then next to it draw an oval that is five times as wide as it is tall. Color the tall one green and the wide one yellow. Group them together and select Transform. Set the Repeat Number to 35 and the Rotate angle to 10. The Move and Scale number should be 0 and 100 respectively. Click OK. If you play around with the position of the two objects relative to each other, you can generate a lot of different results. (Figure 7)

Groups of Solid Objects

The final trick is to group solid objects and transform them. The one limitation is that you can't set the rotation point of a group, so you have to trick the program, by creating a long or tall group that has its center where you want it. A simple way to play with this is to create three circles and place them in a roughly triangular arrangement. Fill each circle with a different solid color. Select them all and group them. Use Transform and set the Repeat Number to 9 and Rotate to 40. See how the objects interweave? This can be taken even further. The design that leads off this article uses the same ideas. (Figure 8)

Going from Here

At this point many readers may be thinking that this is a pretty trivial use for a powerful program like Art Expression, but you would be wrong. Using a drawing program to design logos and letterheads is one valid task, while exploring art is another. I encourage you to sit down and try these and other designs. Get your family involved as well. Designs like these are very easy to understand. Also the designs make great conversation pieces printed out.

•AC•

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CanDo: An Interactive Authoring Tool

Part 1—Comparison with Visual Basic

by Randy Finch

After having used *Microsoft Visual Basic* (VB) in the *Windows* environment on my PC-compatible for a while, I decided that I would like to have a similar tool for my Amiga. After studying reviews in several magazines, I decided that *CanDo* was probably the closest thing to VB available for the Amiga. I called INOVAtronics, the producers of *CanDo*, and asked a representative how *CanDo* compared to Visual Basic. After talking for a while, I realized that he was not very familiar with VB. However, after asking some rather probing questions, I decided that *CanDo* was what I was looking for. I was pleased with certain features of *CanDo* and disappointed with others. Since that original purchase, I have upgraded to version 2.0 of both *CanDo* and VB. I thought it would be worthwhile comparing these two products to see how one of the top visual programming tools for the Amiga stacks up against one of the top visual programming tools for the PC.

First off, let me mention that *CanDo* 2.0 and the standard edition of VB 2.0 have the same list price (\$199). There is a professional edition of VB available for a higher price (\$495). Also, there is a version of VB available for DOS.

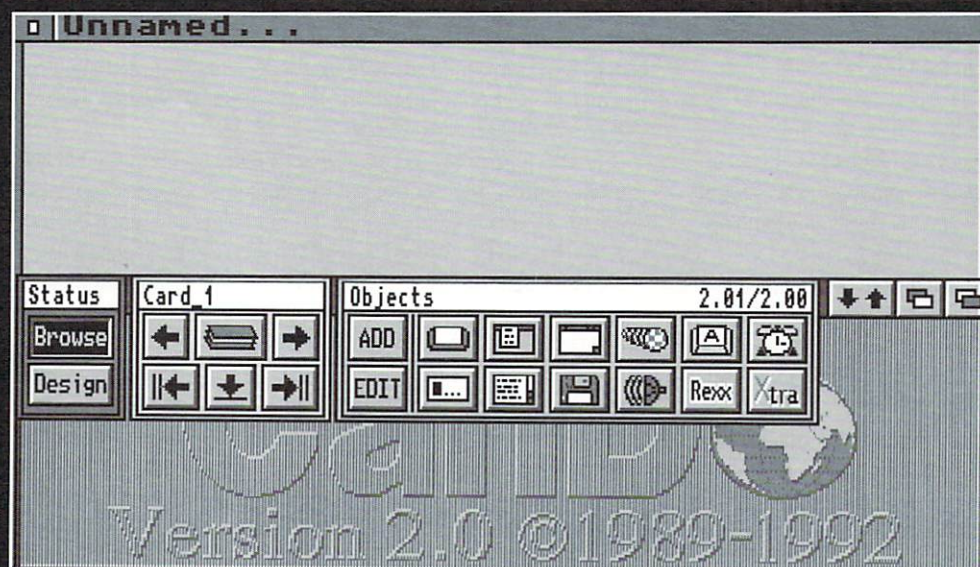


Figure 2. CanDo 2.0 Interface

CanDo is one of the more powerful authoring systems available for the Amiga.

CanDo is called an interactive software authoring tool while VB is called a visual programming system. For all practical purposes, they are the same except that CanDo has its own unique programming language while VB uses a modern structured version of the BASIC programming language. If you are familiar with BASIC programming, you would probably be able to come up to speed with VB faster than with CanDo. However, as we shall soon see, there is much more to interactive visual software authoring and programming language tools than keywords and variables. In both CanDo and VB, the user interface is designed visually. No coding by the programmer is needed. This is the great appeal of visual programming: you have to code only the application-specific parts, not the generic interface parts common to most programs.

What VB Can Do, CanDo Can Do (sometimes)

Upon loading VB and CanDo, you will find several similarities and several differences. VB has a menu bar and toolbar window, a toolbox window, a project window, a properties window, and a blank form (Figure 1). The menu bar contains all the pull-down

environment, you must select a graphics resolution supported by your graphics display card. Once set, all programs run in this resolution. Also, all programs run on one screen. In contrast, the Amiga can have multiple screens each containing multiple windows. This helps the display stay more organized. The problem with not having multiple resolution screens available to the programmer is that you have to design your interface for the lowest common denominator which is currently VGA (640 x 480, 16 colors). If you design your interface in SuperVGA (800 x 600 or 1024 x 768, 256 or more colors), it may not look right on a computer that only has VGA. Also, you may want your application to have multiple screens at different resolutions. This is easy on the Amiga, but hard-to-impossible on the PC.

Controls or Objects

VB and CanDo have many different interface objects, called controls in VB, that can be added to an application. Some objects are common to both; others are only available to one or the other. Some of the common objects are pull-down menus, command buttons,

CanDo has the edge when it comes to creating an executable file for distribution. You can create a shorter executable file that requires the shared `cando.library`.

menus that let you navigate through the program while the toolbar contains buttons that let you more quickly execute some of the most frequently-used menu functions. The toolbox window contains buttons for each of the interface controls that are available to your application. VB Professional contains some custom controls not available in the standard edition. The project window provides a list of the forms, code modules, and custom controls used by your application. The properties window provides a list of properties of the currently selected control or form. The blank form can be used as the initial form in your application. Pull down menus, interface controls, and a toolbar can be added to the form.

CanDo starts up with a blank card. There is no difference between a blank card in CanDo and a blank form in VB. On a separate screen overlaying the bottom of the blank card, the menu bar, toolbar, and toolbox are displayed in a combined way. This is called the Main Control Panel (Figure 2). Everything you need to navigate the CanDo environment is on this panel.

VB supports a Windows feature called Multiple Document Interface (MDI). An MDI form acts as a container for child forms. This allows your application to handle several projects at once and share code in the process. This can be simulated with CanDo, but it is not so easy.

To an Amiga user, the method used to display the control panel is not unusual. However, it points up one of the great advantages that the Amiga has over Windows: multiple resolution screens on the display simultaneously. VB offers no such interface because Windows offers no such interface. Within the Windows

text entry boxes, and list boxes. Some objects are common to both products but are more easily implemented in one or the other product. For example, check boxes and radio buttons are much easier to handle in VB. However, incorporating animation is much easier in CanDo.

VB includes a combo box control that is absent in CanDo. This control is essentially a text entry box and a list box combined. Therefore, it can be simulated in CanDo but it takes a bit more work. Also, VB includes some controls that allow you to design a custom file requester. This is more difficult with CanDo; however, CanDo does have a pre-built file requester that can be included in your application. A pre-built file and font requester is available in VB Professional as a custom control.

One particularly nice feature of VB not found in CanDo is the frame control. This control acts as a container for other controls. You can group several controls together in a frame and when the frame is moved, all the enclosed controls go with it. This makes it easy to lay out functional areas of your application interface and then reorganize it later. The appearance of a frame can be simulated in CanDo but the functionality is not there.

VB has a grid control for spreadsheet-like input that is missing from CanDo. Also, your VB application can be an OLE (object-linking and embedding) client and can also exchange data with other applications using DDE (dynamic data exchange). There is no equivalent to OLE on the Amiga that I am aware of. Hotlinks and ARexx are the closest things to DDE on the Amiga. CanDo supports ARexx but not Hotlinks.

CanDo gives you more control over the appearance of objects than does VB. You can easily give your interface a 3-D appearance. VB Professional comes with some 3-D custom controls but they require you to use a set gray background for them to look right. With CanDo you can create 3-D objects on any color background.

When it comes to drawing shapes such as lines, circles, rectangles, etc. on the screen, VB wins out. You can draw shapes easily and modify their sizes quickly. CanDo will let you draw on the screen, but it writes code for you instead of directly incorporating the shape into the window. When you want to modify the shape, you have to either edit the code or redraw the shape, forcing CanDo to write new code. The old code must then be erased.

VB is much better at handling the resizing and moving of controls than CanDo. In VB, you move a control by clicking on the control and dragging the mouse. Also, when the control is clicked on, an outline box with resizing handles is drawn around the control. By clicking on the resizing handles and dragging the mouse, the control can be resized in any direction quickly and easily. In CanDo, you must click on the object to bring up the object's edit requester. A few more clicks will get the object moved or resized. This is not very efficient.

VB Professional comes with some tools and documentation that help you to create your own custom controls using a C/C++ compiler. Additional controls (objects) can be added to CanDo through the XTras button; however, there is no information with the software about how to do this. The ability to add your own custom controls may not be of interest to the casual programmer, but it is still important. There are tons of custom control packages for VB available from third-party companies. I know of no such packages available for CanDo.

Code One

Both VB and CanDo use the event-driven programming paradigm. In short, this means that the user interface is made up of controls or objects (i.e. menus, buttons, text entry boxes, list boxes, etc.). As the user interacts with the interface using a mouse, keyboard, joystick, or some other input device, certain object events occur. For instance, if the user clicks on a button, that button will receive a click event. Therefore, most of the code you write for your application is telling the system what to do when an event occurs. VB takes an object-oriented approach to its controls while CanDo takes a control-oriented approach to its objects.

In VB, controls have properties, methods, and events. A property is some attribute of the control such as width, font, name, etc. Some properties can be set at design and run time. Others can be set at only one or the other.

A method provides a functional operation on an object. Anyone familiar with C++ will have no problem with this concept. Suppose I have a list box with a name of `lstNames` and I want to add another item, in this case a name, to the list. I would invoke the `AddItem` method of the list box.

When you double-click on a control in your VB application interface while in design mode, a code window appears. A drop-down list shows all of the events available to the chosen control. When you select an event in the list, VB creates a subroutine shell. It is up to the programmer to fill in the subroutine to make the program functional.

CanDo takes a different approach. Objects have properties just as VB controls do; however, they are not obtained or set in the same manner. To obtain a property, you sometimes use a command and other times a system variable. For instance, if you want to obtain the current window's size limits, you would use a command as follows:

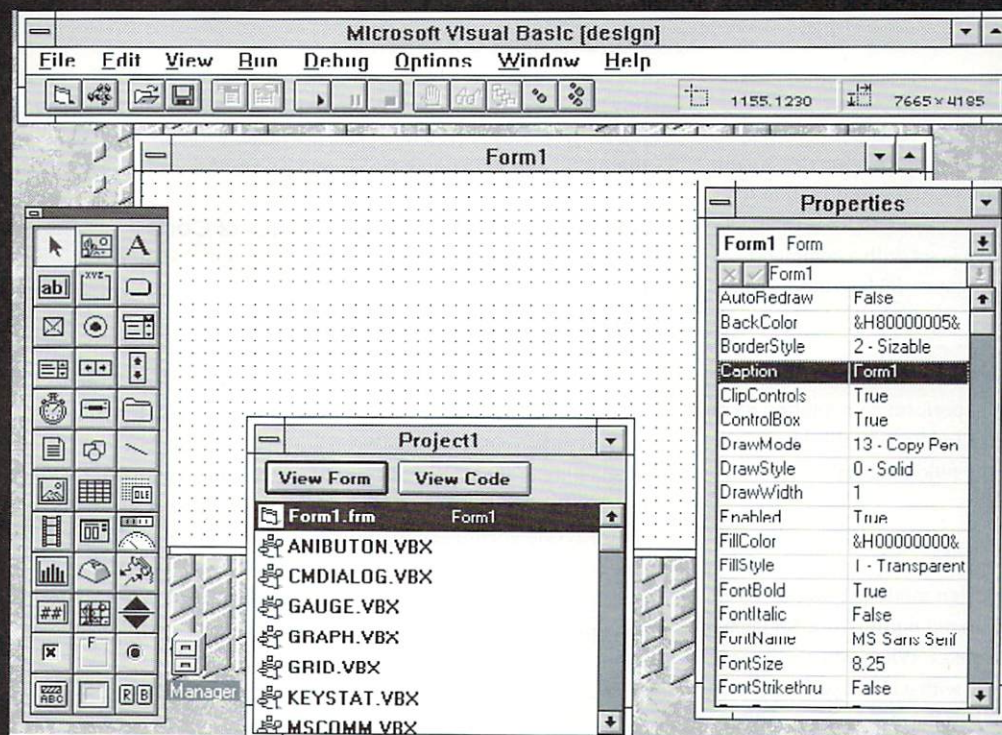


Figure 1. Visual Basic 2.0 Interface

**Like Visual
Basic,
CanDo's
power lies in
its interface.**

MOVING?



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```
GetWindowLimits MinXSize, MinYSize, MaxXSize, MaxYSize
```

However, if you want to obtain the current window's title, you would use a system variable:

```
CurrentTitle = WindowTitle
```

Notice that in both of these examples, no reference is made to which window you want the information for. The information can only be obtained for the current window. If you want the information for another window, you must make it the current window. To make things more confusing, the window title is set with a command rather than assigning a value to the system variable WindowTitle:

```
SetWindowTitle "I Don't Like Titles"
```

In a similar fashion, if you want to perform an operation on an object, a command is used rather than a method. To disable an object with a name of MyObject, use the following statement:

```
DisableObject MyObject
```

When you click on an object in design mode to bring up its edit requester, there will be a series of command buttons, one for each of the events that can be handled by the object. When you click on one of these event names, an editor appears with a blank page. You can fill in any code you want to execute when the event occurs. This is very similar to VB except for two things: (1) CanDo has less events

available to its objects and (2) CanDo does not create a subroutine shell. The latter difference makes it slightly more difficult to call one event routine from another event routine.

As you can see, there are quite a few differences in the way VB and CanDo handle objects. I prefer the method used by VB; however, I am sure others will prefer the method of CanDo.

Varying Variables

VB and CanDo are quite comparable when it comes to standard variable types and operators. The usual complement is available in both products. VB has a currency type variable that can be very useful for someone writing financial software. It also has a variant data type that can mutant from one variable type to another. VB also allows user defined variables that look a lot like C structures.

CanDo has features that makes it far superior to VB when it comes to handling variables. These features are the dynamic sparse arrays and user-defined record variables. Arrays are dynamic because they are created as needed and sparse because they are not dimensioned and do not necessarily have consecutive indices. Record variables let you create highly complex user defined variables without ever having to predefine the structure of the variable. This works somewhat like stems do in ARexx. Thus, you can have a variable that looks like the following:

```
MyData.Account[6].Name
```

without ever defining the inherent structure of the variable. Also, if Account[1] through Account[5] have not been referenced yet, no space will be taken up for them. This is due to arrays being sparse. These user-defined variables are exploited in a very interesting way to allow for easy data entry to your application. Also, highly complex user variables can be saved to and retrieved from disk with one command.

Documenting Documents

CanDo allows you to create documents that can be edited and displayed. There are many commands available for manipulating documents. No equivalent feature is available for VB. I will be discussing this in detail in the second part of this article also.

A Picture Is Worth a Thousand Lines of Code

VB allows you to add pictures to your application just as CanDo does. Of course, the products support different graphics file formats. VB supports bitmaps, icons, and metafiles. CanDo supports IFF pictures and brushes.

When it comes to stringing pictures together to make an animation, CanDo is the clear winner. VB allows you to sequence several picture files together to create an animation, but the availability of the ANIM file format on the Amiga allows CanDo to excel in this area. (Note: CanDo actually uses BrushAnims rather than ANIMs. A conversion utility is included in the package.) Commands are available for loading, moving, and removing BrushAnims. Also, individual scripts can be executed as each frame is displayed. This is a very powerful feature for synchronizing events.

Sound Off

CanDo is definitely the leader in the area of sound because VB does not support sound except for being able to beep the speaker with the BEEP command. CanDo allows you to add 8SVX sound files to your application. Commands are available for loading and playing sound files as well as setting the channel and volume. A script can be executed when a sound begins and another when it ends.

Help!

VB comes with extensive on-line context-sensitive help. It is essentially like having the manuals on-line and available at the touch of a button. CanDo has an on-line help system, but it is not nearly as extensive as VB's and it is only partially context sensitive.

VB Professional comes with a help compiler. This allows you to create some rather complex context-sensitive help for your own application. However, creating the files that the help compiler needs is not for the light-hearted. You must use a word processor that can write files in the Rich Text Format (RTF). Some rather complex codes are needed. The task is easier if you own *Microsoft Word* for Windows and custom templates. Even so, the planning and

know the program was created in Visual Basic. Given the stigma BASIC has of not being a professional level language, this can be a problem.

Summing Up

As is typical when comparing similar products, each one needs some of the features of the other to make it a super product. VB is geared towards creating productivity software and therefore lacks the animation and sound capabilities that are needed for game and multimedia applications. Also, to be even more valuable as a productivity software development tool, it desperately needs the flexibility of the user-defined record variables and dynamic sparse arrays that are included with CanDo.

CanDo is geared towards just about any kind of application. It excels at database development because of the flexible user variables. The sound and animation capabilities help it excel at multimedia applications and games that don't need the speed of assembly language. However, to ever be used for the development of higher end productivity applications, it needs to have a way for third party companies to add custom objects and a standard way to add context-sensitive help.

CanDo gives you more control over the appearance of objects than Visual Basic. You can easily give your interface a 3-D appearance. VB Professional comes with some 3-D custom controls but they require you to use a set grey background for them to look right.

organization that is required for good context-sensitive help can be overwhelming to the casual programmer.

CanDo offers no integral way of creating a help system for your application; however, you can design your own. You will have to determine what your file format will look like and how you will access it and display it on the screen. If anyone has developed a way of easily doing this, I would like to hear from him or her.

Compiling

CanDo has the edge when it comes to creating an executable file for distribution. You can create a shorter executable file that requires the shared library `cando.library`. This shared library can be used only by people who own CanDo. Alternately, you can create a significantly larger (about 130KB) stand-alone executable file that requires no other files except, of course, your support files like animations, graphics, sounds, etc. When distributing your program the latter way, no one can really tell how you created it. It could just as easily have been written in C.

VB does not allow you to create a stand-alone executable file. The freely distributable dynamic link library `VBRUN200.DLL` is always needed. I have heard some professional programmers say that this destroys the effectiveness of the language because, since the DLL file has to be distributed with your program, your users will

There you have it. As I continue to program with VB and CanDo, I will be anxiously awaiting both Visual Basic 3.0 with CanDo extensions and CanDo 3.0 with Visual Basic extensions. Well, I can hope, can't I?

Note: Just before submitting this article for publication, I received notice that VB 3.0 was about to be released. As I feared, it does not have any of the CanDo features I wanted. However, it now has a powerful database engine from the Microsoft Access product, hierarchical lists, and more. OK, Inovatronics, it's your turn. Let's see a powerful new CanDo 3.0 that'll blow our socks off.

•AC•

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I N S I D E

AReXX

by Merrill Callaway

Early this winter, I received a telephone call from Cathie Dagar of SLAC, The Stanford Linear Accelerator Center. She had heard of my book, *The AReXX Cookbook*, and invited me to attend the Fourth Annual International REXX Symposium at La Jolla, California, at the end of May. I decided to go after I had learned that Michael F. Cowlshaw, who invented the parent language of AReXX called REXX, would be attending. I was disappointed to learn that William Hawes, who ported REXX to the Amiga, calling it AReXX, would not be attending, but I thought it worthwhile to go and find out more about my favorite language and what others were doing with it on various platforms all over the world. It was a most interesting gathering from many standpoints. This month, I'd like to relay some of the REXX lore I learned at the symposium, and discuss some of the ramifications of REXX as its future relates to the future of the Amiga.

A Short History of REXX

Mike Cowlshaw, who is currently an IBM Fellow working at the IBM U.K. Laboratories, started work on the original REX back in 1979. He had designed five computer languages and REXX is his latest. In the beginning he derived the name from REformed eXecutor, and later changed to REXX for REstructured eXtended eXecutor. These acronyms have lost most of their original meaning in these days of Graphical User Interfaces and windows, but all that reforming and restructuring was intended to make mainframe computer code less arcane and more readable as plain English.

The idea for the original language was for it to feature instruction syntax that anyone could program in: the language for "the rest of us," as it were. Mike started work on the original REXX as an IBM mainframe language to enable electrical engineers and other "non-programmers" to write macros and programs all by themselves, without having to call on software engineers to do it. The original effort was not an officially sponsored IBM development. After Mike worked on it over 4000 hours, the first version shipped. A few years later, IBM adopted REXX officially.

**Everything
I Ever
Wanted
to Know
About REXX**

The Fourth Annual REXX
Symposium for
Developers and Users

Rare Combination

The genius of the language is in the fact that it is simple and powerful. One can code complicated algorithms in REXX because it's a fully-featured language, but the code can be followed easily because of the understandable syntax and structure. Many so-called "power" languages are written for machines to understand, rather than humans. The inverse is true of REXX, but power is not sacrificed! Actually, the simplicity of REXX has been a sort of hardship: people just don't believe that something so easy can be powerful. The affection I and the others who attended the symposium feel for our pet version of REXX is ironically much like the affection we Amiga users feel for our machines running AmigaDOS. One of the conclusions I came to at the symposium is that ARexx is arguably the finest implementation of REXX anywhere! We have the best language on the best machine using the best operating system. I found much agreement and even empathy among the REXX crowd that the best is not always the most popular.

REXX Runs on Many Platforms

IBM VM mainframes, Unix workstation platforms, IBM OS-2, MS-DOS and even Windows PCs, the Apple Macintosh, and of course the Amiga have various implementations of REXX, some better than others and some with compilers. Right now, the fastest

growing segment of REXX development is under OS-2, which ironically is the most Amiga-like of the versions I saw. It is also Amiga-like in that it is ignored by the press and considered "dead" by the "Windows" crowd. As you might expect, OS-2 is far better than MS-DOS/Windows as an operating system. For instance, it is a "real" multitasking OS, and not a shell running over MS-DOS.

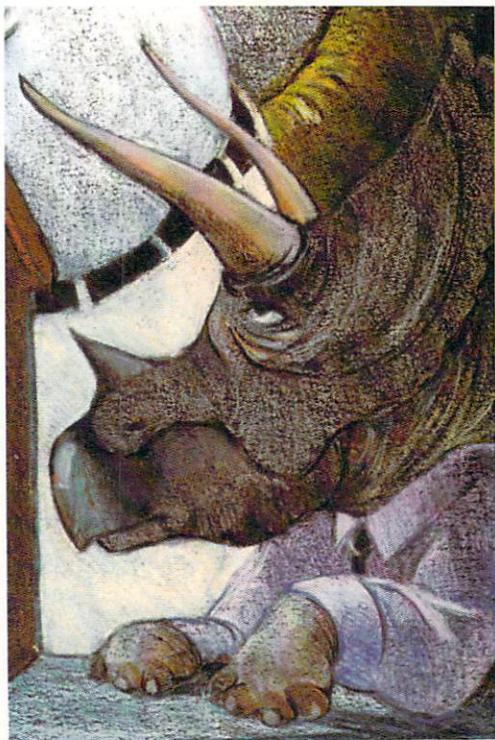
REXX Compilers

I compared notes with Walter Pachl, Manager of Development Support and Test, from IBM's Vienna Software Development Laboratory about the Amiga REXXPlus compiler as it compares with the latest mainframe REXX compiler, which Walter is responsible for testing. After comparing notes, I discovered that the stats and specs on the REXXPlus compiler are similar as to speed increase, but the code blows up bigger on the Amiga version: a 4:1 increase as opposed to a 2:1 increase in size for the mainframe compiler. OS-2 has several products that write REXX code and then compile executables from it.

OS-2 REXX vs ARexx

The OS-2 environment has advanced the farthest of any of the REXX platforms. Under OS-2, REXX is included just like ARexx is on the Amiga, as part of the Operating System. The differences

There were five GUI "front ends" demonstrated that write REXX code. Visual REXX for OS-2 is under development by Eric Giguere of University of Waterloo and Watcom. Eric is the author of *Commodore's Amiga Programmer's Guide to ARexx*.



between them are interesting. The Amiga has the advantage of a unified if small market. Most Amiga developers are solidly behind putting ARexx ports and command sets into their products. This cooperation was toward the top of everyone's wish list for the other platforms, and I confess I was a bit smug when it came to question and answer time after each lecture. I'd usually be able to point out that the Amiga already had that feature or the other as they named things they were aiming for.

OS-2, on the other hand, suffers twice: first from underdog status as an operating system against Microsoft and Windows, and second, from second status behind BASIC. Microsoft, the giant now bigger than IBM, with over 2000 "millionaire stockholders" in its employ, is solidly behind Visual Basic (VB) as its "language for everyone else." Microsoft will never support REXX, although third-party developers such as Quercus offer REXX for MS-DOS machines. Bill Gates is committed to Basic and will not change his mind, even though BASIC and VB are demonstrably inferior to REXX. As I said, these REXX folks share our Amiga attitude. But they must first win a niche for an operating system (OS-2) and then try to persuade developers to put API's (Application Program Interfaces, the equivalent of ARexx ports), in their software products. Also, I wonder whether the profile of the OS-2 user includes a penchant for programming his own stuff. I predict that OS-2 will not reach number one status, but will carve out a niche for

itself similar to but probably much bigger than the Amiga market. For the moment, ARexx is the best implementation of REXX on any PC platform.

ARexx is not all good news, however. While Commodore and the Amiga are moving slowly, ARexx is static. Commodore was invited to send an ARexx representative but declined. As far as I know there isn't any R&D or even support for ARexx going on at Commodore. They obtained it from Bill Hawes, who isn't developing ARexx anymore as far as anyone knows. Commodore commissioned one book, *The Amiga Programmer's Guide to ARexx*, and that's about it for support. When REXX goes through another upgrade, ARexx will no longer be current. A REXX upgrade is underway that will include some, if not all, of the 10 most user-requested features, listed below.

Will REXX Pull Ahead of ARexx?

The other platform developers are moving rapidly, and I predict that REXX capability will surpass ARexx in the next year, particularly on OS-2. OS-2 can hold its own against Windows, contrary to popular belief. I've said before that ARexx, and the developer support of ARexx, is what really sets the Amiga apart. My days of saying this may be numbered. Let me give you some examples of the REXX cutting edge that is sure to draw support from OS-2 software product developers. Simon Nash of the IBM U.K. Labs is developing Object-Oriented REXX, called Oryx, after the African antelope that is also its acronym. The prototype he demonstrated is remarkable. It has a Graphical User Interface (GUI) to write all the code. The objects encoded by Oryx appear as icons on the screen. They can be connected and communicated with in unique ways. It's as if you could send/receive messages to/from your procedures and not just send messages to entire applications. Oryx will make modular programming easier than ever! It will blur the distinctions between procedure, application program, and data. Oryx will allow users to tailor just the features they need to fit into their system. Tools can be smaller and more specialized, letting users assemble the exact applications they need.

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IBM is developing yet another one, not named yet, and finally, there is a shareware V-REXX on BBSs.

The Amiga has one "Visual-ARexx" front end that I have seen and tested, and I like it very much: *T-Rexx* by ASDG. This is a sort of specialized Toaster ARexx front end, but it can be adapted to general use. I'd like to see T-Rexx modules for writing code for more

IBM research is showing that REXX is first class as an OOP language.

Object-Oriented Programming is the hot topic in programming now.

Graphical Interface REXX Programming

There were five GUI "front ends" demonstrated that write REXX code for OS-2 machines. Visual REXX for OS-2 is under development by Eric Giguere of University of Waterloo and Watcom. ARexx insiders will recognize Eric as the author of *Commodore's Amiga Programmer's Guide to ARexx*. He is no longer working on any ARexx projects, having gone over to OS-2 full time. *VisPro/REXX* by HockWare was another offering for OS-2; it shipped the day of its presentation, May 20. In addition to Oryx,

stuff than just video. Maybe I'll write some myself. Send in your suggestions.

ARexx Representation

As it turned out, I was the only ARexx guy there. That was embarrassing for Commodore, as if they'd notice, but an excellent opportunity for me. I was invited to join the International REXX Language Association's steering committee, which held its first meeting over lunch at the symposium. Our purpose is primarily to

promote REXX in all its versions. A document is under development to specify the range of commitments and services IRLA will undertake, such as newsletters or BBS/e-mail listings of information.

Join the REXX Symposium!

I might point out that the REXX Symposium is open to anyone at all. The only catch is that attenders and speakers alike are charged a fee of \$300 to attend or speak. Next year the fee may go up, and the symposium is to be held in England, in either Winchester or Oxford, my choice. The Fourth Symposium attracted only developers, but it was open to users as well. I'm not sure how much of a draw it would be for Amiga ARexx users, given the lack of interest shown by Commodore, but it is a chance to meet people on the cutting edge of REXX development. Amiga developers certainly will see opportunities and ideas to pursue. The people from SLAC, who are used to life in the fastest lane of all (linear accelerators), asked me why Commodore doesn't support their products more. The only answer I could think of that these guys could relate to was, "You know what anti-matter is; now meet anti-marketing!"

10. Put in a Digits condition so that SIGNAL ON DIGITS could trap unexpectedly overprecise numeric data.

9. Allow expressions in stem references.

```
nextj=j+1
nextk=k+1
say fred.nextj.nextk
```

also allow different notation:

```
say fred.[j+1,k+1]
```

or

```
say fred.(j+1).(k+1)
```

8. & 7. PARSE enhancements.

```
Parse caseless (matches mixed case)
```

```
Parse lower (translates lower case first)
```

6. Variable Call target or "indirect call".

```
where="anyname"
```

```
call(where) a, b
```

calls "anyname".

The genius of the language is in the fact that it is simple and powerful. One can code complicated algorithms in REXX because it's a fully-featured language, but the code can be followed easily because of the understandable syntax and structure.

The Future of REXX

Let's look at some of the points discussed by Mike Cowlshaw about where REXX is going, and hope that Commodore will support ARexx more. Presently there are 20 commercial implementations of REXX on almost all significant platforms. There are 41 published books and manuals, five in 1992 alone; 60 if you count second editions and service guides. There are 10 to 20 million users on all platforms of which only 5% to 10% are programmers. REXX has its own ANSI standard X3J18 since 1991. The original book on REXX by Mike Cowlshaw has sold over 100,000 copies.

As hardware speed increases, REXX, an interpreted language, is being used for a wider set of applications than ever before. REXX speed is measured in clauses per second (cps); an IBM or Amiga PC expects to process around 27,000 cps; on a RISC-based machine, 42,000 cps; and on a mainframe anywhere from 90,000 cps to 465,000 cps.

The Top Ten Countdown

The top ten language improvements asked for in the 300 or so e-mail messages Mike Cowlshaw receives every day are as follows in countdown order from number 10 to number one.

5. Change and count functions.

```
needle = "is"
haystack = "This is the time"
new = "at"
say countstr(needle,haystack)
say changestr(needle,haystack,new)
```

would return "2" in the first instance, and "That is the time" in the second.

4. Call by reference or aliasing.

```
call fred p, q+1, r.
```

...

```
fred: procedure
use alias a, ,c.
```

or

```
fred: procedure
use arg(a),b,(c.)
```

By the way, on the Amiga, you can accomplish somewhat similar references back to the calling program using the REXX *Rainbow Library Series Stem/Array Functions* by the Dineen Edwards Group. This is a powerful feature, but it opens a can of worms that can get you into complex trouble! But it's number four on the list to call by reference.

3. External procedure expose. At the moment, you can only variables expose in an interior procedure in REXX. This lets you expose your variable table from an exterior routine. This is similar to the above and you can do this in ARExx with the above library's assgnarray function.

2. External DO. This is to iterate over all the tails of a compound variable. The tails are the part(s) after the stem (up to and including the first period). This lets you iterate automatically over an entire array.

```
Do tail over fred.  
say fred.tail  
end tail
```

1. Date and time conversions was number one on the request list!

```
say(date('usa',19930827,'standard')  
would display  
08/27/93
```

What About REXX Trends?

The number one trend is that REXX is migrating from the mainframe to the desktop. Amigans can be proud of ARExx because we were "doing it way back when...." The Amiga was the first PC port of REXX because it was the first multitasking PC. Now OS-2 is going strong because it is multitasking too. OS-2 people feel ignored just as we do.

The second trend is networking, which encourages standardization of applications and languages. REXX is by far the easiest of Inter-Process Control (IPC) languages. We had demos of UNIX Perl by Larry Wall, its author, and MS-DOS/Windows Visual Basic by R.P. O'Hara of Microsoft. Neither of these languages comes close to REXX. Perl is powerful but inscrutable. VB is messy, ugly, and convoluted. And it doesn't do IPC. O'Hara, who wrote one of the early books on REXX, said he was teaching his son REXX!

IBM research is showing that REXX is first class as an OOP language. Object-Oriented Programming is the hot topic in programming now.

REXX books and manuals will increase. Mike showed a graph with a steep climb over the past few years.

Contacts

If you would like to get a free copy of the proceedings of the Fourth International REXX Symposium please write:

Publications Dept.
SLAC, MS 68
P.O. Box 4349
Stanford, CA 94309

The 1992 REXX Symposium Proceedings are in SLAC Report 401. The 1993 REXX Symposium Proceedings are to be published in September. Write to SLAC to find out the publication number or contact by e-mail:

TechPubs techpub@slac.stanford.edu
Cathie Dagar cathie@slac.stanford.edu
Jim Weissman jhw@cup.portal.com

I would like to see more Amiga developers get involved in supporting REXX, because as REXX gains in popularity, so will the Amiga. REXX could be one of the standard means of networking the Amiga with other platforms.

•AC•

Please Write to:
Merrill Callaway
c/o Amazing Computing
P.O. Box 2140
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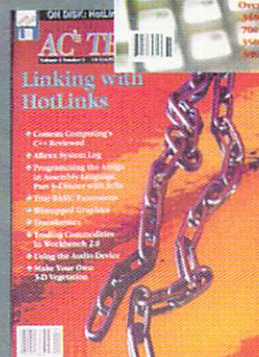
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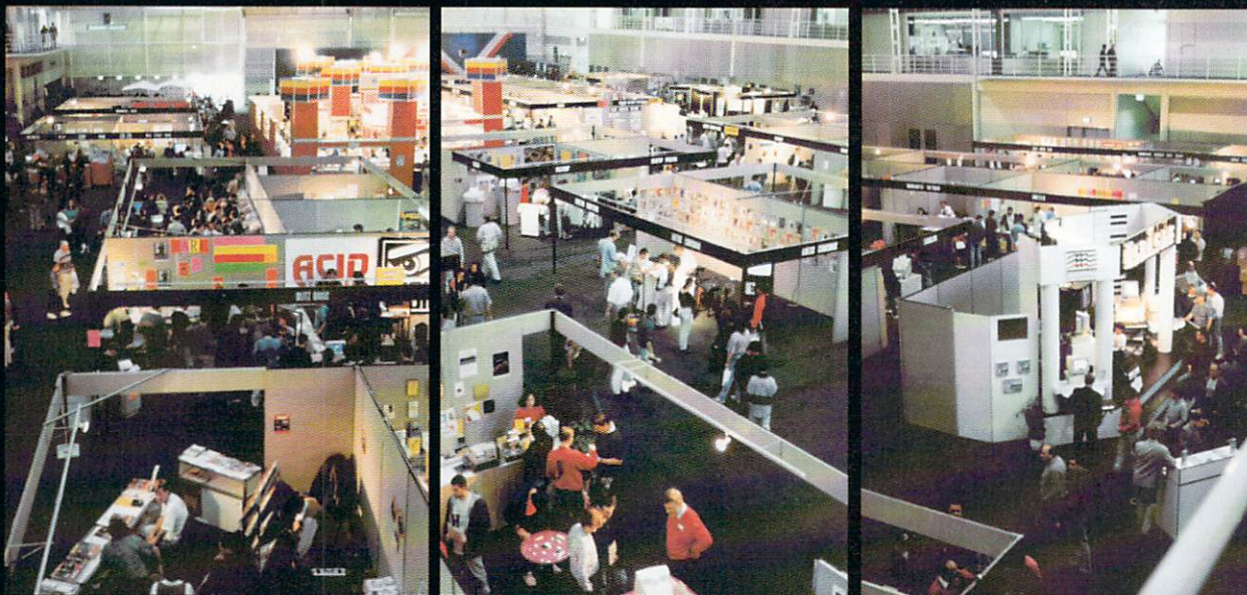
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From The Top! The WOCA floor (left) was a collection of the best Australian products as well as a representation of vendors and products from the rest of the world.

World Of Commodore Amiga—Sydney, Australia

From OpalVision Video to Color Computer's Amiga non-linear Video Editor, thousands view the latest innovations in Amiga technology Down Under.

Sydney's *The Daily Telegraph Mirror* ran three full pages of news and advertisements for the Amiga which appeared on the first day of the event. Over 50 exhibitors and companies were represented while more than 25,000 attendees appeared during the three days of the event—World Of Commodore Amiga, Sydney 1993 was a success! WOCA (July 2-4) attracted attention at a level rarely seen in other countries. The Amiga is a very popular computer platform in Australia and the Amiga users are involved. With WOCA Sydney's continuous free seminars, special demonstrations, and Amiga product developers from around the world, Amiga users had plenty with which to be involved.

Once again, Commodore Australia hosted WOCA at Darling Harbour. The \$200 million facility is without exception the best facility used by CBM for these events. With good public transportation, reasonably located (with a continent the size of the United States and a smaller population than New York, "reasonably located" becomes a relative term), and assorted shops, restaurants, and museums in the immediate area for all members of the family, Darling Harbour is an ideal place to attract Amiga users and wanna-be's.

Opal Technology Attracts Crowds

Opal Tech (please see the associated article on page 96 of this issue) displayed their new OpalVision support modules for video

with promised delivery by fall of 1993. This unique system piggy-backs video and audio manipulation modules on their already popular OpalVision card. While this process does raise the price of the entire unit, the added benefit of choosing a system built to a user's needs and allowing the user to expand hardware as needed gives OpalVision a distinct advantage over other systems.

In addition, OpalVision has been created to work on RGB video. This not only offers the best video for manipulation, but allows the video to be processed in standard Amiga mode until the image is ready

to be seen or recorded. This universal use of video allows OpalVision owners to be either NTSC or PAL compatible, opening new video production possibilities for Europe and Australia.

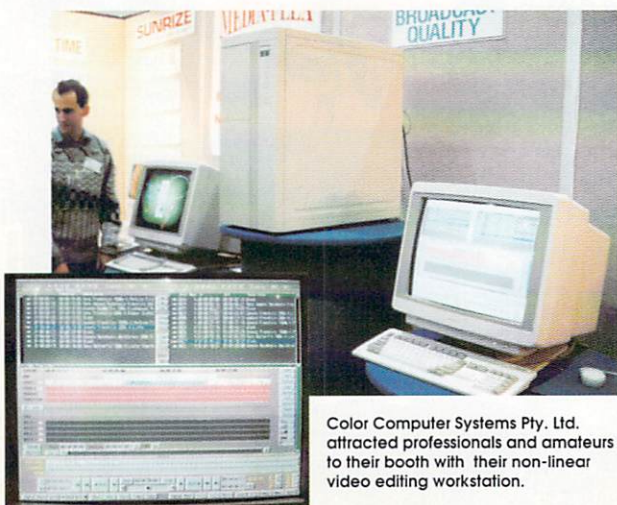
With completely user-configurable video effects, audio control, and an open system that allows users access to their favorite software tools, OpalVision was well received. Standing-room-only crowds gathered to watch the OpalVision modules perform during seminars and in large demonstrations at the Opal Tech booth. The monitors were carefully studied as OpalVision flipped, twirled, spun, texture mapped, and morphed live video images. All of the special effects were created in real time. Australians are supportive of their fellow countrymen, but there is little doubt OpalVision would receive the same accolades from Amiga users in any Amiga event.

Australian Developers

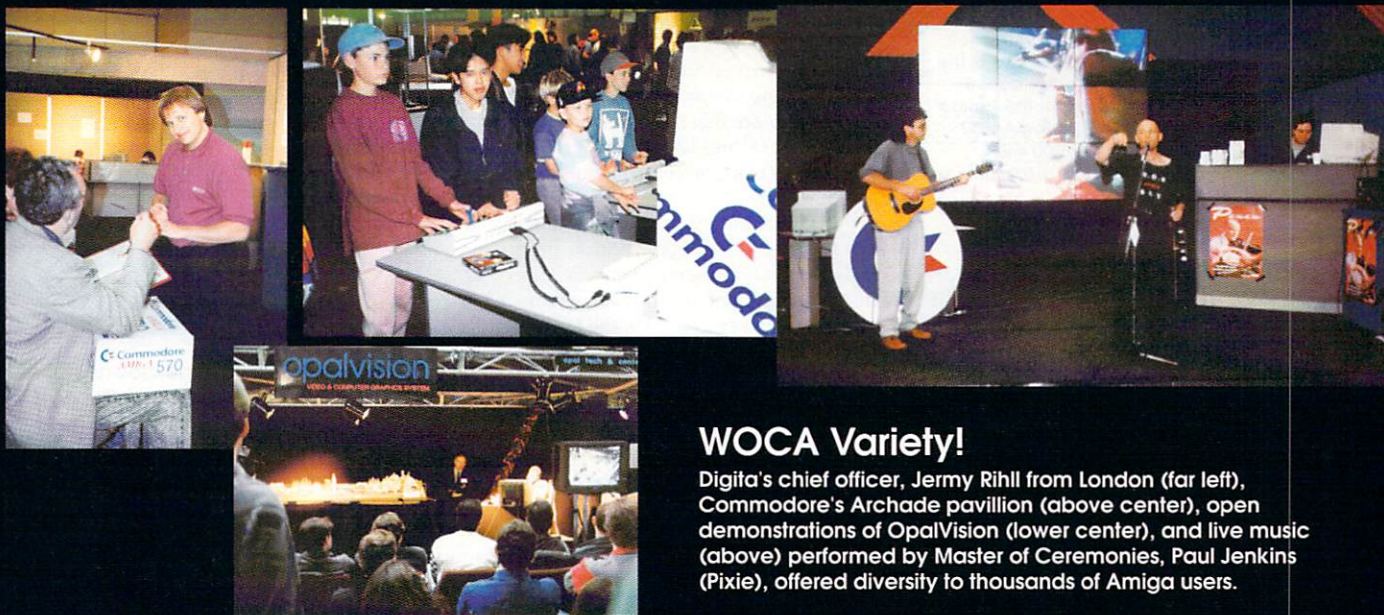
Australian developers rarely have an opportunity to attract world attention for their products, so few missed WOCA. While many developers shared booths with their distributors, a few either joined forces with other developers or user groups, or created stands of their own.

KickBoard Plus from Unitech Electronics allows users to switch between 2.0x or 1.3 ROMs. Unitech has also created what they believe is the only SCSI interface cable that will connect a second internal hard drive (not a Quantum) in the A1200 at \$49 AUS.

John Rowe was demonstrating his *Keyboard Overlays* for the Amiga 500, 1200, 2000,



Color Computer Systems Pty. Ltd. attracted professionals and amateurs to their booth with their non-linear video editing workstation.



WOCA Variety!

Digita's chief officer, Jermy Rihl from London (far left), Commodore's Archade pavillion (above center), open demonstrations of OpalVision (lower center), and live music (above) performed by Master of Ceremonies, Paul Jenkins (Pixie), offered diversity to thousands of Amiga users.

3000, 4000, and CDTV. These plastic overlays come with support disks for the programs. Rowe has overlays for AmigaDOS 1.3 and above and the DeluxePaint IV versions. John Rowe is an accomplished artist who won first prize in the popular voting for his animation "Encounter" at the International Festival of Computer Art Bit.Movie '93 in Riccione, Italy.

Phoenix Microtechnologies has a long list of products they either sell for other suppliers or have created. Phoenix's products include the ACE Joystick Adaptor to connect an IBM-style analogue joystick (great for flight simulators) on an Amiga and the Resurrection replacement motherboard for the A1000, which, depending on the options, will upgrade your A1000 to current standard software levels in either PAL or NTSC. Phoenix's Aladdin Professional was in use the entire exhibition, running spotlights and lighting effects in the Commodore distribution area.

ACIDSoftware was demonstrating *Blitz2* (\$95 U.S.), a full implementation of extended BASIC. *Blitz2* offers a wide range of support tools and features to take direct advantage of the Amiga. *Blitz2* will compile a finished program for use as a demo, application, or game.

PC Task 2.0 (\$50 AUS), from Alchemy Software Development, is a PC software emulator for the Amiga. *PC Task* will work in multitasking with your Amiga 500 or better, requires MS-DOS 5.0 or 3.3, and will address your Amiga's memory and peripherals.

Color Computer Systems wowed professionals and amateurs with their Media-Flex digital, non-linear, PAL/NTSC, and online video editing system. Media-Flex uses two Amiga 4000s working in a single tower, which integrates online editing, video compression, eight tracks of 16-bit CD-quality digital audio, 2-D and 3-D graphics, titling, image compositing/morphing, and more. The complex system is organized through a user-friendly graphics interface with a base system price of \$40,000 AUS. Color Computer Systems also offers a wide range of training courses, hardware, video production and duplication

services, graphics production, and more for the Amiga video artist.

Desktop Utilities updated their *Contact* free-form database/contact manager software to version 1.2 and they have created a 24-bit imaging newsletter, *24-bits and pieces*, for Amiga artists. Commercial Productions of Australia offered information on their Amiga training course on AmigaDOS, 3-D Modeling, Animation & Graphics, Video Production, and more. C.P.A. also demonstrated their Amiga Stop-Frame Controller hardware and software interface system that will display 24-bit images from a large variety of Amiga products. Desktop Utilities also offered a single-frame recorder solution, *Diamond Edit* from WaveFrame, for the Amiga 500 and up.

GP Software offered a variety of Amiga solutions. *GPFax-Amiga* (\$159 AUS) is a complete Amiga fax solution that works with most fax modems. *GPTerm-Amiga* (\$99 AUS), a terminal emulation program; *GPTouch* (\$200 AUS), a touch screen driver with ARExx support; and printer drivers for the Canon BJ300/330 or Canon BJC800 Color are also available.

MegaDisc demonstrated their large selection of public domain software. DigiSoft demonstrated their new arcade action game, *Overkill*.

Mindscape promoted the newly-enhanced *Miracle Piano* teaching system with support for *Bars&Pipes* composition software. The *Miracle* also has two song collections volumes

available. Each volume contains a variety of 40 songs in both easy and difficult formats.

QuickNet, an Amiga network Ethernet solution for the A2000, A3000, or the A4000. Selling for \$499 AUS for the twisted pair version and \$469 AUS for the thin Ethernet module, QuickNet is available from Norman Pakes at Resource Management Force.

Neriki offered an assortment of video solutions. The Australian video supplier produces the Neriki Imagemaster genlock for the Amiga, the Neriki Desktop genlock for the Amiga as well as distribution amplifiers and switches.

RUSH Software is the supplier of over 18 different educational software programs created for the Amiga using *CanDo*. These versatile programs teach all ages; and they range in price from \$75 AUS to \$29 AUS. They have also created *Teachers Markbook* (\$110 AUS), a multiple-classroom grade-book program.

Even a few exhibition services were run or monitored by the Amiga. SIDAT provided security for the exhibition with their propri-



Numbers Please! CBM enlisted the aid of Interact and their data acquisition software, which used GVP PhonePaks and an Amiga to poll statistical information from thousands of WOCA attendees.



OVERKILL by DigiSoft Australia is one of the first arcade action games for the Amiga to utilize the A4000 and A1200 AGA graphic resolutions.

etary Amiga security system. The system not only monitors the facility and sends warnings and alarms, but also activates cameras that track movement and save video pictures of the invaders. With the help of GVP's PhonePaks and special telephone kiosks, Interacta Computer Systems polled the attendees on a variety of data concerning the show, Commodore, and their Amigas. Not only is the information valuable for this event, but will it assist show coordinators as they plan next year's marketing and advertising.

Wall Street Video provides training for the Amiga and its applications. Their *An Introduction to the Amiga 1200* video tape was a best seller.

Australian dealers Impact Camera House, MEGHEAD, Ami-Tech, Brashs, Harvey Norman, and more, sold a tremendous amount of products to a hungry Amiga crowd.

The Rest of the World

Bruce Smith Books represented their extensive line of Amiga books from *Mastering Amiga Assembler* to the *Amiga Gamer's Guide*. Meridian Software Distribution Director, Paul Burgess, offered a variety of European and

American software at special savings to attract attention to their London mail order sales. Digita also arrived from England to demonstrate the new *Wordworth v2AGA* word processing software that now takes advantage of the Amiga 4000 and 1200 special graphics features for spectacular color text and graphics manipulation.

PowerComputing demonstrated and sold a wide range of Amiga products from their own design and as a representative for other Amiga firms. The Greyscale Powerscan V3.0, the Colour Powerscan V3.0, the PC1204 4MB memory expansion card, and the XL 1.76MB high density drive were only some of the products available.

Great Valley Products was represented by their Australian distributor, who showcased the G Lock genlock, DDS+ sound digitizer, a series of expansion products for the Amiga 500, and more. Innovatronics demonstrated the new version of *Directory OPUS* directory utility, the *CanDo!*—now with AGA support. Moonlighter Software sponsored their Amiga back-up software, *AmiBack*. The *ARexx Cookbook* author, Merrill Callaway, was on hand to promote the use of ARexx, and distribute his book, published by Whitestone.

Once again, the Australian World Of Commodore was an event rewarding to both attendees and vendors. Commodore Australia worked hard creating the event and they should be congratulated for their effort.

The next World Of Commodore will be in Pasadena, September 10-12. This event was extremely successful last year—don't miss it!

•AC•

(continued from page 96)



OpalVision attracted large crowds at the World Of Commodore Amiga in Sydney.

"The Toaster uses recorded or canned graphic animations. The Roaster chip is using about nine different algorithms. That is effectively the equivalent of 80,000 gates. Ours is algorithmic. We can tell the Roaster chip what we want and it performs the operation. This leaves the Amiga free to create other Amiga graphics over the top. The Roaster is completely configurable. You can get in there with a spline editor, set key points, and spin it around in real time. We have a wide variety of effects that you can change immediately. Since it is completely random pixel addressable, we can do full rotations, perspectives, wrap video on a teapot, and even morph it in real time."

The system is extremely flexible with explanations available for icons and buttons appearing on the screen in real time. You can even move your effect icons around into a setup for your own use.

On audio, "We have an input for a sound sampler so that the sound can be modulated with the visual effects."

There is only one OpalVision for any Amiga. "You will find that the Roaster will do just as much on an Amiga 2000 as on an Amiga 4000 with full acceleration." There is even an adapter for the Amiga 1200, which allows a full OpalVision and the Video Suite to be connected.

When will OpalVision ship? Mr. Rayner was not ready to commit when we would be able to buy the OpalVision video modules. "We are in final testing at the moment. It is hard to pick a precise date. We are getting things to the market as fast as we can while still paying full attention to every little detail."

"We probably could ship within a month, but we would like to spend more time getting more effects together, having the software a lot more tested. We want a bullet proof, mature system before we release it to the public. It will be worth the wait."

Gary Rayner obviously gets his desire for perfection from his background and he is patient enough to take care of the small things. However, his compulsion for perfection does not slow him down. He has learned a lot since he was two—obviously he knows a great deal more about propellants today.

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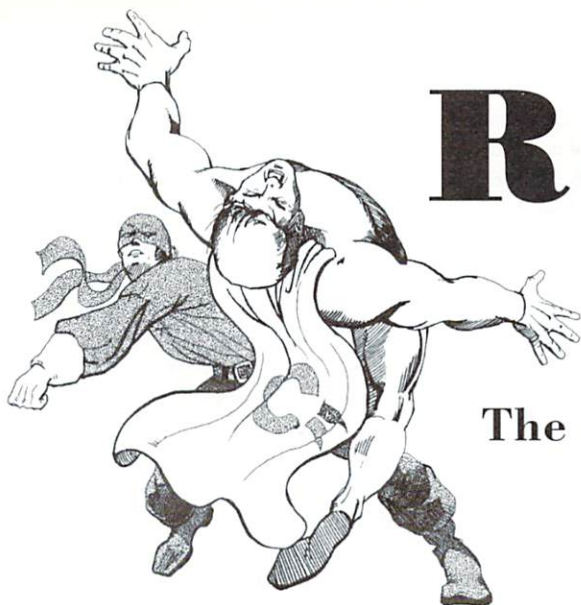
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Roomers

by The Bandito

The Bandito wallops Commodore! Is it fair?

[These statements and projections presented in "Roomers" are rumors in the purest sense. The bits of information are gathered by a third-party source from whispers inside the industry. At press time, these rumors remain unconfirmed and are printed for entertainment value only. Accordingly, the staff and associates of Amazing Computing cannot be held responsible for the reports made in this column.]

Commodore in Trouble

The Bandito has pulled together a special report on Commodore's situation from a variety of public and private sources. This special all-Commodore edition of the Bandito is brought to you by that long-running Pennsylvania show, *The Commodore Follies*.

Well, loyal Amigans, as the old saying goes: If you don't laugh, you cry. Our favorite computer is once again being poorly served by its manufacturer. We all know that Commodore has had its ups and downs over the years, but this time the problem is particularly acute. Let's provide a little background first, so we can view recent events in the proper perspective.

As one insider said about what's happening to Commodore "It's self-destruction in the Osborne tradition." According to the Bandito's informed sources, the announcement of the A1200 and A4000 late last year really hurt Amiga sales over the crucial Christmas selling season. The problem was especially bad since Commodore reportedly stopped shipping A2000's in

order to push the limited stock of the new Amigas. This tactic might have worked better if early production runs of the new Amigas hadn't been plagued with manufacturing problems, including a defective Buster chip, which caused severe shortages of A1200s and A4000s right when they were needed the most. So Commodore stopped selling computers it had, while the computers it was supposed to have didn't arrive on time. This is a bad situation.

From what the Bandito has been able to piece together, December sales were below November sales, and January sales were off hose numbers by an incredible 70%. Commodore then, in January, fired most of their sales staff and reduced the head count in West Chester. As far as sales go, this left only three salespeople and one serviceperson west of the Mississippi.

Meanwhile, Commodore has been losing market share in Europe, their former sales stronghold. How much of a stronghold is Europe? Look at the numbers: in its last fiscal year (ending June 30, 1992) 88% of Commodore sales came from Europe; a mere 8% from North America (the remainder in Asia and Australia). While Commodore is still #1 in European unit sales (though possibly not for long), their dollar share is sinking fast.

In 1991, Commodore was number one with 13.4%* of the personal computers sold in Europe. In 1992 Commodore's market share dropped to 12%*, even though they slashed prices vigorously. In dollar-value, Commodore is #4 in market share, because of the low prices of the majority of Amigas sold (A500s and A600's).

Commodore's dollar-value share is still sinking in Europe; it's dropped from 5%* in 1991 to 4.4%* in 1992, out of a \$22.6* billion market. Obviously, the invasion of low-priced clones into Europe has hurt Commodore at the high end, and the skyrocketing sales of videogames in Europe has hurt them at the low end. This year's unit share and dollar share numbers promise to be much lower. (Editors Note: *These figures could not be confirmed as of press time.)

Commodore Strikes An Iceberg

Now, with this grim picture staring at Commodore's management at the beginning of the year, the bad news struck with full force at the end of March. ("Beware the ides of March, Caesar!") Commodore's had bad news before, but this news set a new standard for awful.

Commodore International Limited reported a net loss of \$177.6 million, or \$5.37 per share on sales of \$120.9 million for the third fiscal quarter ended March 31, 1993. This is a heckuva loss for a company whose shares were valued only at about \$4 apiece before this announcement. Compare this to earnings of \$4.1 million (\$.12 per share), on sales of \$194.6 million in the same quarter a year ago.

So nine months into their fiscal year (as of March 31, 1993), Commodore has lost a whopping \$273.6 million; that's an amazing \$8.27 per share. A year ago, Commodore was riding high with net income of \$49.5 million, (\$1.47 per share) in the same period. Total sales for this fiscal year's nine month period were \$517.2 million; last year it was \$770.3 million in the same span of time.

That's a 33% drop in sales, folks. So Commodore's total net worth (shareholders' equity) for the entire company is now only \$30 million. As you might imagine, the stock market has not responded positively to this news. Commodore shares lost more than 25 percent of their value after this announcement, falling to \$2.87 on the New York Stock Exchange. Now they're hovering around \$3, sometimes as low as \$2.75. Only a year ago the shares were worth \$11. And the year before that, they hit \$20.

What's Commodore's explanation for all this? Let's look at what the official press release had to say (The Bandito's comments are in brackets, like this): "Overall the sales decline of almost 40 percent for the quarter was primarily due to prevailing economic softness in all of the Company's major markets, especially Germany. There was also significant pricing erosion for the Company's older Amiga models and PC products. Unit volume of Amiga products declined 25 percent while Amiga revenues declined over 45 percent. PC unit volume increased 30 percent, but revenues increased only slightly

from the prior year. C64 computer sales were nominal in the quarter." [Translation: They had to chop prices on Amigas, but that still didn't help the sales. Massive price cuts on PC clones helped move boxes, but meant their profits were cut to the bone. And nothing they did could sell C64s.]

"The unit sales decline and severe pricing erosion during the quarter, primarily in the month of March, had a substantial adverse effect on profitability for the March quarter." [Translation: We lost lots of money.] "In light of this significantly changed business environment, the Company reevaluated projected inventory values and determined that writedowns of \$65 million were required to reduce inventory, including the older Amiga products, to current estimated net realizable value." [We came to our senses and admitted that our inventory of A2000s and A500s wasn't worth a whole lot.] "In addition, the Company made a provision of \$70 million for special pricing and promotional allowances, additional restructuring costs, and asset writedowns." [Translation: Since

we don't know any real marketing techniques, we'll just cut prices to try and lower our inventory levels. Somebody'll buy it if we make it cheap enough.]

"Irving Gould, chairman and chief executive officer, stated: "We are extremely disappointed with our results for the first nine months of this fiscal year. We believe that Commodore's technology, brand name and distribution network continue to have significant value and we are exerting all of our efforts to restructure the company to take advantage of these values during this period of severe difficulty." [Translation: I hope to hell I can get some of my money out of this damn company.]

The Bandito has never shown you this before, but in this crisis it's important for everyone to see just what Commodore's position is. So here's their balance sheet.

"(A) Current debt includes \$46 million of Senior Notes, \$13 million of which were repaid on April 12, 1993, as required. As of March 31, 1993 the Company is in non-compliance with certain financial covenants

COMMODORE INTERNATIONAL LIMITED AND SUBSIDIARIES

Condensed Consolidated Statements of Operations

(Unaudited; \$000's)

Periods ended	Three Months		Nine Months	
March 31	1993	1992	1993	1992
Net Sales	120,900	\$194,600	\$517,200	\$770,300
Cost of Sales	232,200	140,300	618,400	538,300
Gross Profit (Loss)	(111,300)	54,300	(101,200)	232,000
Operating Expenses	55,800	49,100	146,100	168,600
Operating Income (Loss)	(167,100)	5,200	(247,300)	63,400
Interest Expense, Net	5,000	2,800	13,900	11,200
Other Expense (Income)	5,500	(1,900)	11,700	(100)
Income (Loss) Before				
Income Taxes	(177,600)	\$4,300	(272,900)	52,300
Provision for				
Income Taxes	-	200	700	2,800
Net Income (Loss)	(177,600)	\$4,100	(273,600)	\$49,500
Net Income (Loss)/Share	\$(5.37)	\$.12	\$(8.27)	\$1.47
Average Shares				
Outstanding	33.086	34.137	33.068	33.782

Condensed Consolidated Balance Sheets

(Unaudited; \$000's)

	March 31,	March 31,
	1993	1992
Cash and Investments	\$21,500	\$60,800
Accounts Receivable, Net	152,100	255,400
Inventories	106,700	202,200
Other Current Assets	10,000	9,400
Total Current Assets	290,300	527,800
Other Assets	83,900	108,200
Total	\$374,200	\$636,000
Current Debt (Notes A and B)	\$115,300	\$71,800
Other Current Liabilities	191,800	165,800
Total Current Liabilities	\$307,100	\$237,600
Long-Term Debt and Other	37,100	60,300
Shareholders' Equity	30,000	338,100
Total	\$374,200	\$636,000

under the Note Agreement with respect to the remaining \$33 million. The lender has waived non-compliance through the end of July 1993 in order to allow the Company to pursue a debt restructuring."

"(B) Current debt at March 31, 1993, includes a \$10 million 11.75% demand loan from a company controlled by the chairman of the Company. On April 12, 1993, an additional \$7 million was borrowed, with \$9.5 million being repaid May 24, 1993, through the sale of inventory. The remaining \$7.5 million debt is collateralized."

What Does It Mean?

Looking closely at the balance sheet, a few interesting facts become apparent. While Commodore's net sales for the quarter are down nearly 40%, their cost of sales for the same quarter, has gone up 65%. Some of this must be promotional allowances and the like, but it's not a pretty picture.

Commodore is now in "non-compliance" on a \$33 million loan from a large insurance company and has until July 31, 1993 to come up with a new way to pay. Commodore is currently trying to convince lenders that this year's Christmas will be a good one, unlike last year. Even Commodore admits that if they have another Christmas like 1992 that the company will be in very, very bad shape.

So what does Commodore plan to do about this situation? Publicly, all they've said is that they will focus first on getting their debt problem taken care of; then they'll try to sell their inventory as effectively as they can.

Meanwhile, if you look at the second note attached to the balance sheet, you'll see that good old Chairman and CEO Irving Gould has loaned Commodore \$17 million dollars recently to help tide them over until times get better. Of course, this loan is at a rate of 11.75% interest, which is pretty good in these days of 3% to 4% savings accounts. Not a bad rate, if you can get it. Certainly better than the return Irv is getting on his stock right now. You'll notice that the loan is collateralized against inventory, so Irving isn't taking any chances here. Makes you wonder, though, if Commodore couldn't have gotten a better deal on a loan somewhere else. After all, they do have collateral, don't they?

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charge of the company, and are therefore responsible for the financial performance of the company, right?

Well, it seems like that's wrong. They're at it again. Mehdi Ali is the fourth highest paid executive in the computer business, raking in a cool \$2,000,000. Although that is a 17% drop from last year, when he made \$2.4 million. (Note: the company's sales dropped 40% for the quarter and the stock has dropped more than 70% over the past year. At some places, that would be far more than enough to get you fired, let alone having your salary lowered.) Irving Gould is #7, with a yearly compensation of only \$1,750,000. Yet Commodore ranks eighth overall in company size, and their stock dropped 70% over the previous year. Commodore's corporate earnings were covered in more red than a Schwarzenegger movie. Yet Mehdi and Irving continue to pull in outstanding paychecks.

Where's the justification for Mehdi's and Irving's salaries? The Bandito can't see any way that their compensation is tied to corporate performance. Gould must have a wonderful set of golfing buddies on the board; they appear to be little more than motorized rubber stamps. Say, what if Mehdi gave up half of his salary and used it to buy some advertising for Amigas in the United States? Now there's a radical idea.

Well, to be fair, Irv's stock holdings were worth only \$28.8 million this year, a 69% drop from last year. So at least he is feeling some effects from the company's poor performance. And after the latest financial news, his stock is worth less than ever. With

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But Irving isn't a complete philanthropist. The Bandito has gotten the latest report on executive salaries in the computer business, and it sure makes for interesting reading.

Commodore's Stratospheric Salaries

Now, you may remember last year, that the Bandito told you that Irving Gould and Mehdi Ali were among the very highest paid executives in the computer business. You might think that with Commodore's pathetic financial performance in the past year that perhaps they might have reduced executive salaries a trifle. You know, somehow linking executive pay with executive performance. After all, these fellows are supposed to be in

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19% of all Commodore shares, Gould does have a strong incentive to see Commodore's stock prices rise again.

Axe Me Again

In an immediate response to the fiscal crisis, Commodore has decided to bury the hatchet—in the back of its already weakened U.S. operation in West Chester. The staff cuts hit everywhere, from engineering to marketing; staff in some divisions was reduced by more than two-thirds, according to The Bandito's spies. Engineering Services dropped from 18 people down to 5, for instance. CATS, Software Engineering, Product Assurance, and other groups were also sliced thin by the cuts. Who got cut? A lot of PC clone people, but also a number of Amiga software engineers and support people, too. But certainly with a 40% drop in sales for the quarter, you've got to expect some healthy reductions in staff to bring the payroll in line with income. Let's just hope they're not getting rid of the people they need to keep those new Amiga developments coming.

The 24-Bit High-Res Overscan Picture

Commodore's neglect of the U.S. market is finally having an effect, as strong European sales no longer exist. Not only has the European economy been weak, Commodore is rapidly losing market share to other competitors. U.S. PC clone companies have invaded Europe and cut heavily into Commodore's PC clone business. Western Europe doesn't want C64s any more, and

Eastern Europe can't afford them. The Amiga is losing market share rapidly as action gamers pick up a Super Nintendo or a Genesis instead of an Amiga. As far as action gamers go, a SNES or a Genesis is much cheaper than an Amiga, has roughly equivalent performance, and has more titles, at least more of the newest titles and licenses.

So Commodore's European stronghold is vanishing. Which means that their neglect of the U.S. market is really hurting them, as they have nowhere else to look to for sales. In the U.S., the market for the Amiga as a home computer has all but disappeared, destroyed by a lack of availability of Amiga software (as the chain software stores drop

been remarkably ineffectual at wielding it, leaving the marketing mostly up to NewTek. Not surprisingly, NewTek has focused on marketing the Video Toaster rather than trying to sell Amigas.


Commodore has to focus all its attention on the Amiga, and rebuild that market step by step. They've got a lot of ground to cover, so it's a good thing that they're finally getting busy. What remains to be seen is whether they have the ability to pull off this resurrection.

Is Commodore for Sale?

Now that Commodore stock is so cheap, and their net worth has plunged to a very low level, the buyout rumors are buzzing like flies around a dying horse. Who would want to buy Commodore, and why? Will it be HP, trying to get a foothold into the consumer market? Sega or Nintendo, trying to move up into the home computer market? Some company that would like a strong European distribution network? Silicon Graphics, who is interested in the consumer market? NewTek, trying to secure the basis for the Video Toaster?

The Bandito hears that several companies are sniffing around Commodore right now, though Commodore isn't really interested in selling. What would happen if someone did buy Commodore? It's a pretty safe bet that if anyone buys Commodore, they will sell off one or more divisions, and there's a good chance Commodore might be completely dismembered. Obviously, Commodore's previous marketing strategy didn't work, so any new owner would try

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Amiga titles), the increasing popularity of SNES and Genesis (taking away the action gamers), and the lower prices and more aggressive marketing of Macintosh and PC clone into the home markets.

Which leaves the professional markets for the Amiga as identified by Commodore: multimedia, presentations, kiosks, training, and video. Well, the Macintosh and the PC Clone (in its various forms) have pretty much conquered the multimedia and presentation markets; the Amiga doesn't have a prayer there. Video is the only place left, and both the Mac and the PC are being promoted heavily in that area. The Video Toaster is the only weapon that can be wielded against them. And Commodore has

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something different. A new owner would doubtless focus on the part of the business that they are interested in and sell the rest. For instance, if the new owner was into desktop video, anything not connected to that would get sold (like the C64 and the PC clone lines), and the Amiga line would be restructured along those lines (no more low-end Amigas, for instance).

Now with only 33 million shares out there, at \$3 a share, the company is worth only \$100 million at best. Bill Gates could buy it with a week's allowance. Heck, even NewTek could probably raise enough to swing the purchase. Looked at another way, all you need to do is spend \$50 million to get 51% of the shares and you can run things, regardless of Gould's 19% ownership. But you can bet Gould controls a lot more shares than that 19%; he probably holds proxies for well more than 50%. Else he wouldn't still be in charge of things, not with the current financial results.

Counter Argument

Some industry insiders say that this fiscal problem isn't as bad as it looks. It's yet another crisis in the series that Commodore has had for years, although perhaps worse than most. And all the hoorah about staff cuts and inventory writedowns is nothing to worry about; Commodore is merely downsizing (or "rightsizing," in today's jargon). While it's frightening to do it all at once, this does some important things for Commodore. It shows them the dangers of relying solely on the European market; it reinforces the importance of the Amiga line,

and the relative loss in value of the PC clone and C64 lines, thus focusing CBM's attention on the Amiga, where it belongs. This gets rid of all the old inventory, cleaning the slate for faster production of the new Amigas.

The downsizing of the company is due to the new focus: Amiga first, foremost, and only. No more PC clones; most of the engineers laid off were PC clone engineers. They may continue to market the C64, but no development effort will be spent in that direction. The Amiga and Amiga technology are where Commodore's future lies, and management (finally) seems to realize that.

So while there will be turmoil for a while as Commodore adjusts to its new size and creates a new corporate vision to go with it, in the long run Commodore will survive.

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Certainly there's the core of a good company there; with some proper management it could once again be a major force in computing. While the financial picture looks dismal right now, things can change rapidly in this business. One industry observer even predicted that Commodore will make a profit next quarter. "They took the bad news all at once, so they could get past it and move forward," he said. "Now they're positioned for growth, and the hardware price cuts will stimulate demand." We'll see, won't we?

•AC•

**by Frank
McMahon**

Art
Department
Professional's
Latest
Upgrade
Version
2.3.0

THE VIDEO SLOT!

This month we'll go over ASDG's latest upgrade to the popular image manipulation program *Art Department Professional*. Going from 1.0 to 2.0 was quite an advance last year and this year the jump from 2.0.0 to 2.3.0 is just as substantial. While far from an overhaul, it does provide some much-needed additions as well as basic restructuring of the standard layout.

When I first installed ADPro 2.3.0 on my 4000, the first thing I noticed was how sluggish the screen redraws were. I thought maybe I had accidentally installed the non-floating point unit version (68000) by mistake. So I reinstalled it. Same thing. I tried running it on an Amiga 2500 and it was back to the normal speed, with requesters snapping on-screen in no time. Finally I realized that if you install ADPro 2.3.0 on an AGA machine, the default screen is comprised of 256 colors. I found this out by grabbing a screen using the Load Screen loader and checking the screen controls color amount. While it's a nice feature, it is fairly unnecessary to have a lo-res four-color control screen default to 256. It does make all screen refreshes lag even with a 68040. The fix? The tool type "ADPROSHALLOW" can be added so that the ADPro screen will be only three bitplanes instead of eight bitplanes. You will not be able to see 256 shades when you composite multiple images but your general work will go quicker due to the responsiveness of the interface. The good news is that all screens used for composition that previously were limited to 16 colors now carry a full 256-greyscale palette on AGA machines.

After installation, the first thing you'll notice is a little regrouping of the main interface screen. Color Controls are now in the top left with the Image Operators directly below it. On the right are the Savers and Loaders with the Screen Controls underneath. First let's go over the new savers and loaders. A major part of ADPro's claim to fame is the programmers at ASDG concentrated on multi-platform compatibility early on. They have constantly updated and enhanced the amount of different files from other computers that can be brought in to the program. One of the newest loaders and one that I find extremely handy is the Video Toaster Framestore loader. Up until now the only way to get images out of the Toaster and into ADPro was to go through the tedious process of moving the FrameStore out of the buffer and into *ToasterPaint* and then saving it as an RGB file. This step is now eliminated and all you have to do is choose the Framestore loader and load it as you would any other file. It loads in compressed and non-compressed 2.0 Framestores but any attempt I made to load 1.0 Framestores resulted in an error message. I'm sure ASDG has forgotten about 1.0 files but I just happen to have a collection backed up on floppy from when I first started with the Video Toaster and it would be nice if ADPro supported all variations—there are only a few—of the Framestore files as the Toaster does. In addition to loading, you can also save Framestores directly within ADPro; by the way, this doesn't require a Toaster to be on or even installed in your Amiga. The saver allows you to turn compression on or off. Compression does create much

smaller files but it's still unclear if there is a loss of picture quality. On a video screen it is not noticeable but if you plan to use the Framestores for other purposes, such as RGB output, it might be best to save it uncompressed. Like any other picture format, if you save the file as uncompressed you get the maximum amount of picture data, whereas compression has to leave something out to achieve its smaller file size. You can also set the Filter when saving to between 0 and 4. Zero may produce more dot crawl but produces the sharpest images while 4 may eliminate dot crawl but introduces bleeding. I'd recommend 0 as standard and go up to 2 or 3 only if you notice some shimmering or flickering on your image when rendered into the Video Toaster buffer.

Another new loader/saver is Anim. While it does not exactly allow loading an animation, it does read an ANIM file and let you select which frame you want to load and process. There is even an option to count the frames in case you're not sure how many the animation contains. The Anim saver is where the real power comes in. You can process a frame or group of frames and then save them to an ANIM file. First you create or select an ANIM file. Then you process a frame and use the Anim saver to tack it on to the end...it's that easy. The saver displays your filename, width, height, type, and number of frames. During compression you can select Smaller or Faster. Smaller will optimize the ANIM for file size while the Faster gadget will encode the ANIM faster and not worry about compressing the actual ANIM frames. There are two types of

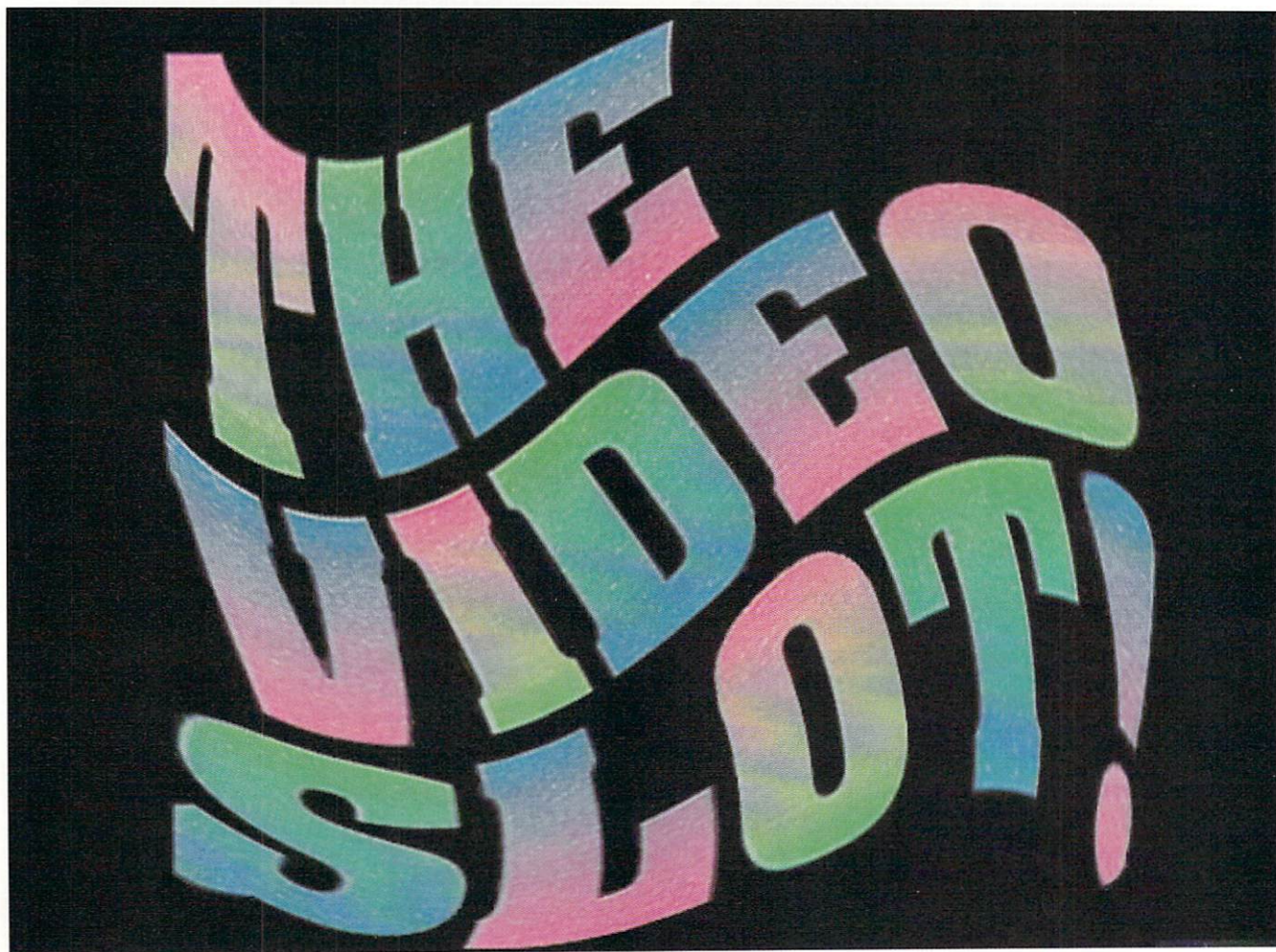


animation compression methods as well. Opcode 5 is the standard animation file that is used in many programs. Opcode 8 is a new format that will probably produce files a little larger, but those files will play back faster on any Amiga and up to twice as fast on an AGA machine. Opcode 8 (Anim8) is not as widely supported yet but could be the way to go if you have a 4000/1200 and want to achieve the maximum frame rate in modes such as HAM8. In addition, there is a Wrap-Up command that copies the first two frames and moves them to the end of the animation to create a smooth looping animation.

The DPaint loader/saver is quite impressive. It allows you to directly access *Deluxe Paint IV* AGA's buffer; however it does require AmigaDOS 2.04 or later, as does *Deluxe Paint IV* AGA. Also, it works only with version 4.6 or higher of *Deluxe Paint IV* AGA. But if you have an earlier version than 4.6 the installation procedure of ADPro 2.3.0 will upgrade it! The DPaint loader will allow you to load the current picture or frame in *Deluxe Paint*, which must also be running. If you want a different animation frame then you can select it within ADPro and then choose "Show DPaint" to see what you're about to load in. This will be a boon to AGA animators. Say you are working in *Deluxe Paint* and you are starting a new scene. You want to darken the background or add an effect such as emboss, oilpaint, or morph. Simply load ADPro, move the frame

into ADPro, process it, then save it back directly into DPaint's buffer! It really is as easy as it sounds and it works perfectly. You can either load a DPaint page, the entire image as defined in the Page Size requester, or just the currently displayed portion excluding the title bar and toolbox. Between the Anim loader/saver and the DPaint loader/saver, animation creation is greatly enhanced on AGA machines. In addition, there is a similar load/save option for OpalVision except it is an operator. It allows you to use the *OpalPaint* program to touch up the image currently in ADPro's buffer and then save it back to ADPro.

The Firecracker saver has been standard and now comes the addition of a Firecracker loader. This allows loading whatever is currently in the board's buffer into ADPro. You can specify the board number, buffer (A or B), and the horizontal/vertical size. Another new loader/saver is called Temp. This is basically a temporary buffer that ASDG recommends as an Undo. Well first of all this is no undo, but it is handy. Whenever you are doing something irreversible, you save your current image to the temp buffer. If the result of the operation is not what you wanted, you simply reload your original image from the temp buffer. The problem is, you would need to do a Temp save before every action. It's tedious via the requesters but thankfully ASDG provided ARExx scripts to attach to function keys. It's easy: just rename the included




Page 75: ToasterFrame of flower processed with ADPro 2.3.0 OilPaint operator.
Above: ToasterFrame processed with ADPro's new Twirl command.

ARexx Load/Temp and Save/Temp files to whatever function key you would like to use. Then you can just hit F1 to save a temp file and F10 to undo (load the temp file). A new loader is included for the VLab Digitizer from MacroSystem, enabling the user to bring a digitized image directly into ADPro. A OpalVision saver is now included that allows scrolling the display as well as centering the screen with the mouse pointer.

Several new operators are included with version 2.3.0. Antique transforms your image to an old-style sepia tone. Collapse does simple morphing by letting the user take a circular part of the image and pull it towards the center of the circle. It is most useful in creating caricatures using digitized images of people's faces. It can also be used to alter existing textures or add surreal effects to common photos. The method for resizing and moving the circle is straightforward and is used with many of the visual operators. Images in visual operators are displayed in 256 greyscale on AGA machines. KillTemp is an operator that frees up the memory in your Temp buffer by deleting the current image. You can tell if there is an image in your Temp buffer by choosing the "About" button and seeing if there is an asterisk next to the buffer size value. Polar Mosaic creates a tiled image in the form of a circle divided by pie-styled cuts. Options include Fast or High Quality; the latter takes longer but produces a more precise final image. Rotate takes a circular section of the image and turns it. It is all done visually in greyscale with the mouse. Sim Print is a new operator that lets you simulate what the printout of your graphic will look like. There are various dithering options such as halftone and ordered. Twirl, as the name implies, takes a circular part of the image that you set and spins it as many degrees as you input. Other enhancements include 256 greyscale on the loader composite screen, although it is still lo-res, two new dither modes, global dither amount (1-256), support for new AGA modes such as Super72, a ton of ARexx scripts that do everything from loading and showing Firecracker images automatically to converting an image to an oil painting, and a fantastic new manual. The manual includes excellent reference material, tutorials, and pages upon pages of ARexx commands and techniques. There are several small programs that are included such as *Splitz & Joinz* that break up a large image to fill several floppies. But the amazing part is that here are versions of this program included for Mac, Windows, and DOS! So if you want to transfer huge images to almost any platform, it is now possible. The biggest part of this new ADPro version is the improved FRED program. It allows sequencing of operators and effects to create professional animations and multiple file output. This program alone deserves a column in itself so I'll save it for a Video Slot in the near future rather than breeze through it in the limited space this month.

So how has ADPro matured over the years? Well it's a standard and it's a favorite for several reasons. One reason is that most of us have been using it for years, before anything else even approached its capabilities. Another reason is it produces professional output very quickly. It has fewer features than similar programs but those features have been polished and tweaked for maximum speed, efficiency, and professional output. It's familiar and not overly complex. But it is time to move on. ADPro needs to be rewritten from the ground up and incorporate more real-time processing via display boards—the lack of real-time display options now is the program's main drawback. Most of the time you never see what you are working on, unless you constantly keep sending it




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to your framebuffer or keep re-rendering it. The next version will be a reworked edition, and I'm sure will not fail to amaze. The competition has gotten extremely hot in the past year and ASDG is surely aware of it. Do I use the other image programs more these days? Well, I like *ImageMaster* because of the real-time display with my Firecracker board, but 90% of the time I'll turn to ADPro for image manipulation. While not as diverse in the feature department, it's faster than the other programs, is much easier to move around in, and produces crisp, excellent output. With the new features like ToasterFrame loading/saving, DPaint buffer access, Premade ARexx macros, and the much improved FRED processor, Art Department Professional's latest version should be in every video production department.

•AC•

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Analog Control in a Digital World

by Scott Wolf

Diehard computer jet jocks already know about the highly realistic control that analog joysticks give to MS-DOS flight simulations, not to mention the addition of a second, separately functioning fire button. Since analog sticks use potentiometers instead of switches, aircraft control is smooth and relative to the amount of input applied. Over a dozen Amiga games now support analog sticks but where do you insert that big IBM plug into your Amiga? Some sort of adapter is needed, and thanks to four considerate sources, some sort of adapter is available.

**A
look at
analog joystick
adapters
for the
Amiga.**

First up are the D.K. *Analog Joystick Adapter*, a simple 3.5-inch cable with a screw-together 15-pin IBM connector at one end and a screw-together 9-pin Amiga connector at the other, and Steven Nicholas' *Analog Link*. The Analog Link is quite similar to the D.K. but with a longer (9 1/2") cable and a black rubber strain guard on the IBM end. The analog IBM stick will now function plugged into the Amiga joystick port via the adapter. However, since there is no software standard for handling analog devices, the results are sometimes unpredictable. For example, in Domark's *MiG-29* titles and MicroProse's *F-15 Strike Eagle II*, the fire button functions are reversed; Button 1 fires rockets and missiles while Button 2 fires the internal cannon. This reversal occurs with all of the adapters in this article.

Additionally, since the range of resistance in potentiometers varies from stick to stick, the D.K. adapter and Analog Link will not always function properly in combination with non-standard joysticks (Kraft's *Thunderstick*), or those that have no "trim" controls (Thrustmaster's *Flight Control System*). The Thrustmaster FCS (\$99.95), modeled after the control stick of an F-4 Phantom, is the ultimate flight simulation joystick; it sports an additional two buttons and a "hat" switch—a miniature four-way stick at the top used to switch views in IBM sims. Of course these extra features won't work on the Amiga.

The problem is that Thrustmaster depends entirely on game software for calibration, and so, titles like *F-15 Strike Eagle II*,

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Knights of the Sky and EA's *Birds of Prey* won't work with the D.K. or Analog Link/FCS combo. Jaeger's *Fighter Duel Pro*, the MiG-29s, Spectrum Holobyte's *Flight of the Intruder* and MicroProse's superb *World Circuit* work fine.

Next up is the *DP IBM Analog Interface* from DigiPrint, Inc. At first glance, the DP looks just like the Analog Link. Closer inspection reveals not only higher quality molded connectors, but a three position switch on the IBM end of the adapter. This switch is mounted on a small circuit board with four capacitors connected to the analog joystick's pots. The different control sensitivities provided by the switch actually allow the Thrustmaster FCS to work with every game I tried.

Also available from DigiPrint is the *DP IBM Mouse Interface*. This device allows you to use not only an IBM bus mouse with its incredible pinpoint accuracy of 400 dots per inch, but trackballs and mouse-pens as well. Like DP's Analog Interface, the Bus Mouse Interface has machine molded connectors and requires no special software. Suggested retail is \$14.95.

Last, but definitely not least, is the *Amiga Smart Port* from InterACTIVE Digital Devices. The Smart Port is a 3x4-inch precision molded box less than an inch thick, with inputs for mouse, digital joy-stick, and an analog joystick. The appropriate device becomes active with a single click of its firebutton and an LED indicates an active analog stick. The Smart Port also comes with two 3-foot

extension cables, a 15-page operating manual and a 3.5-inch diskette with the "SmartPortCal" utility program. Used in conjunction with the X and Y adjustment screws on the Smart Port, this utility allows accurate calibration of even the Thrustmaster stick. Additionally, with IDD's *Game Port Adapter* (sold separately) and a "Y" cable, a second analog stick and rudder pedals may be connected for throttle and rudder control; currently, only *Fighter Duel Pro* supports rudder pedals. The Game Port goes for \$14.95.

The only problem I encountered with the Smart Port was, once again, with MiG-29. Not only were the fire buttons reversed but the cannon fired continuously on its own. Peculiarities with F-15 II, *Knights of the Sky*, *Birds of Prey* and SubLOGIC's *Flight Simulator II* are rectified in patch programs also from IDD; the K.O.T.S. patch enables throttle and rudder pedals, too. At \$52.95 the Amiga Smart Port is definitely in a league of its own; however, the advantage of not having to physically switch joysticks for different games and the fact that the Smart Port is unlikely to become obsolete make it worth considering despite the hefty price tag.

•AC•

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DIVERSIONS

Hook

by Rob Hays

One of the latest releases from Ocean Software is *Hook*, the graphical adventure based on the Stephen Spielberg movie of the same name. For those who haven't seen the movie, the story concerns a man named Peter Banning who has forgotten he was once Peter Pan. His children are kidnapped by Captain Hook, and Peter must travel back to Neverland to rescue them. This

is where the game begins. After a short animated introduction, you are plopped down in the middle of Pirate Town, with no idea where Hook has taken your kids or how to get them back.

The majority of the screen is devoted to your view of Peter's world, with a row of action icons and an inventory display below. Actions are limited to Look At, Talk To, Pick Up, Use, and Give To. The game is entirely mouse controlled, with the exception of the pause key. For instance, if you want Peter to talk to another character on the screen, click on the Talk To icon and then the image of the person you're

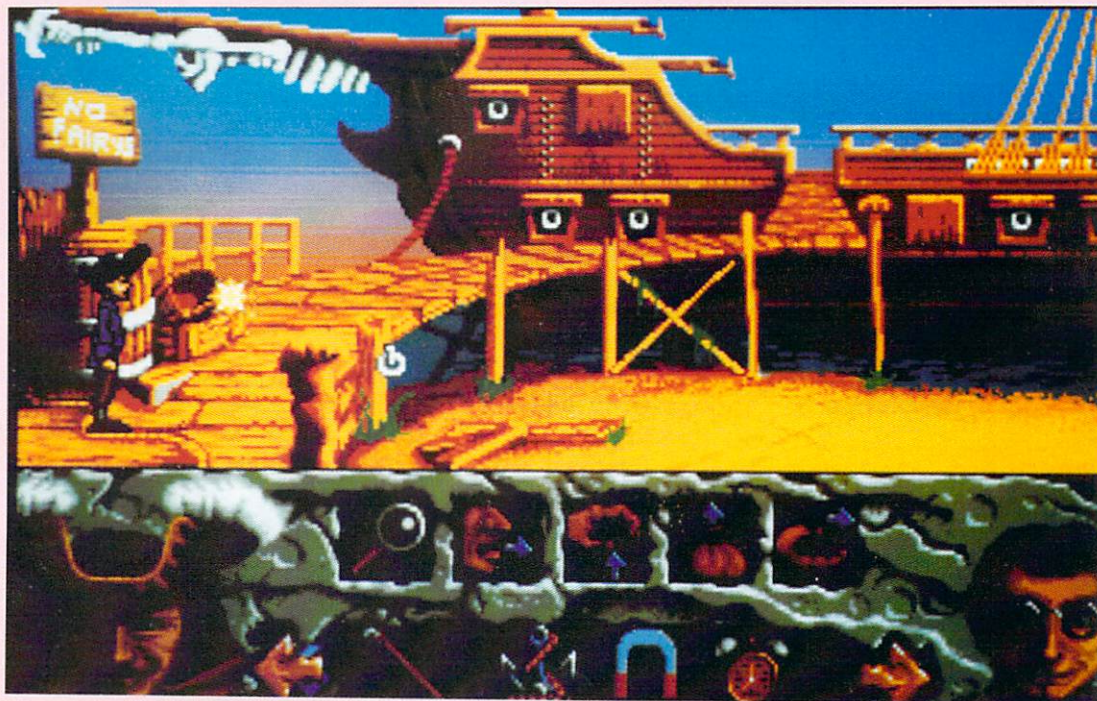
interested in talking to. Peter will walk over and a sentence will appear above his head. Click the right mouse button to cycle through available phrases, which change with the character and the circumstances. When you find what you want Peter to say, click the left mouse button. The text changes color, Peter's mouth moves, and the answer appears above the person you're conversing with.

You'll have no doubt when you do something to advance your cause, because the image of Hook on the left side of the screen will snarl and shake his hook menacingly. If you get

stuck and need help, try talking to Tinkerbell. She's that ball of light constantly circling above your head. Ask too much or too often and you will get a curt reminder that "You're Peter Pan, you figure it out." Keep in mind that Peter Banning is basically a coward, and if he balks at doing something risky, keep insisting. He will eventually overcome his fear and continue.

You quickly learn that in order to get to Hook, you have to look like a pirate, so your first task is to beg, buy, or steal some pirate clothes. Since no one is interested in taking your out-of-town checks, buying is out. After

collecting enough clothing to pass as a pirate, you can sneak onto Hook's ship. Tinkerbell talks him into allowing time for you to prepare for the battle, and you make your way to the tree home of the Lost Boys. Here you engage in some training, solve the remaining puzzles, and regain your memory. At this point the game is basically over because you sit back and read explanations from Tinkerbell, then you're transported back to Hook's ship for the



anti-climatic battle. The sword fight with Hook is controlled by your conversation. Say the right phrase and Hook backs up a few steps. The wrong phrase allows him to advance.

The solutions to most of the puzzles in Hook are relatively straightforward. My eight-year-old nephew, who is not an expert computer gamer, was able to solve them with little assistance from me. In fact, this might be the perfect introduction to computer adventuring, or the solution to a rainy weekend with a house full of kids.

The graphics and animations are adequate, but tend toward cartoonish. On the other hand, I thought the sound effects were very good. They were well integrated and not overwhelming, ranging from seagulls and waves, to a creaky door swinging in the breeze. When music plays, it fits the mood of the area nicely.

Hook is supplied on four copy-protected disks, and although the Amiga version

cannot be installed on a hard disk, the game will use two floppy drives if you have them. Up to five positions can be saved on a separate disk, and games can be saved at any time. Hook requires Kickstart 1.2 or higher and 1MB of RAM. Since you must boot from the floppy, there is no problem playing on AGA machines. However, unless you're a speed reader, you may need to repeat the same phrase two or three times before you are able to read the entire reply if you play on an accelerated Amiga, but otherwise the game runs properly.

Hook
Ocean of America
1855 O'Toole Ave, Ste. D-102
San Jose, CA 95131
(408) 954-0201
FAX (408) 954-0243
Inquiry # 238

character, lets Cytron choose between the plethora of weapon options, control certain aspects of the center's security system, get hints for the level, and retrieves energy for itself.

Cytron, however, is far from just your average kill 'em and forget 'em shooter. It contains a multitude of different puzzles that must be solved, or averted, in order to obtain passage to the exit teleporters. A large part of solving the puzzles in this game depends on the unique nature of the Cytron robot; it has the ability to separate into two smaller and different robots, named "Cyt" and "Ron." This feature is a really nice addition to the game and adds a whole new level of strategy, as the player can control only one of them at a time, but still must keep an eye on the second droid, lest it gets demolished by persistent enemies.

The puzzles range from activating pressure plates, to flipping switches in a correct sequence, to activating one, or the other, of the smaller Cytron robots. Many levels require the two robots to split up and negotiate separate narrower passages, in an effort to help the other robot out. As I said before, this mitosis is very keen.

In addition to all of that, there are secret codes found throughout the game that will lead to bonus levels where energy and extra weapons are available for plunder. Some of these codes, when used early on in the game, actually allow the player to warp to later rounds, thus preventing him or her from having to complete levels that have already been sweated through and won. This feature has, oddly enough, been omitted from the instruction manual, but is easy enough to figure out; it's also very useful, since the game has

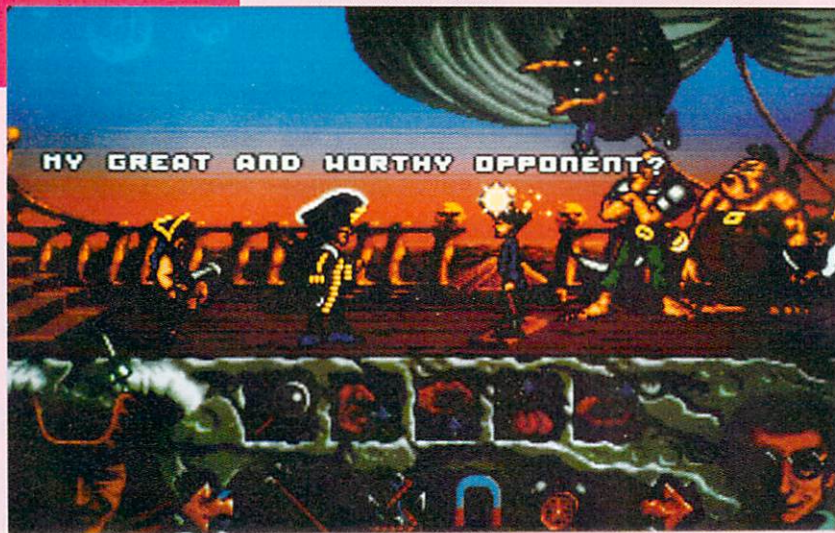
Cytron

by Jason D'Aprile

In Psygnosis' latest shooter, a top secret research center has been overrun by its robotic workforce; and a prototypical, ultra-sophisticated, and armed-to-the-teeth robot named "Cytron" has been sent in to rescue the scientists before the lab goes nuclear. Boy, now where have I heard that one before?

Actually, *Cytron* is a very good game, extremely reminiscent of an old favorite C64-game of mine called *Paradroid*, which has an essentially similar plotline. From its excellent, if very short, cinematic opening sequence to the great rock soundtrack on the title screen, to the actual game itself, everything, for the most part, looks and sounds great. But, coming from Psygnosis, that should be a given.

The game is played from a top-down, or plane view perspective, rather like *Gauntlet*, and all of the graphics are suitably small, but nicely detailed and realistic. Game play is great and extremely fast; depending on the stage, this game veritably flies. The player controls the Cytron robot throughout the complex in an effort to rescue at least a minimum number of scientists, access computer terminals, which, depending on the terminal type and clearance level of the



no other sort of save feature. There are also five different options for controlling the game, ranging from the simple one-button joystick to two joysticks, or even two mice.

Weaponry in the game is plentiful and for each of the three facets of the Cytron robot, there are specific guns that are especially made for only one of them, and some of these guns carry a specific purpose in terms of puzzle-solving. The enemies in the game range from mindless, unaware drones to intelligent hunters that will chase after either Cytron, or actually go after scientists in an effort to kill them. If too many scientist are killed, then you'll have to play the level

over, as you need to rescue at least three to make the teleporter open.

There's also the detonater to worry about. Spend too much time dallying around a level and the whole floor disrupts in a tremendous explosion. Also, the more intelligent robots can actually activate the detonater when they detect Cytron.

Cytron is chuck full of power-ups, interesting puzzles, and fast-paced action. There are a whole lot of subtle things that the player finds out by accident as the game progresses that certainly increase gaming life; my favorite one is the "Pacifist Bonus," which is awarded to the player at the end of the level for not killing most, or all, of the enemy robots.

My only real problems with the game were the painfully slow initial loading time from the boot disk and the fact the gameplay screen is not covered at all in the otherwise fairly lengthy manual. Overall, however, Cytron is an excellent game of its type; I recommend it.

Cytron
Psygnosis Limited
675 Massachusetts Ave.
Cambridge, MA 02139
(617) 497-5457
FAX (617) 497-6759
Inquiry # 237

Dune

by Jason D'Aprile

To be perfectly honest, I wasn't expecting much from this game. I assumed that it would be, well, boring. So imagine my surprise when I was treated not only to a fantastic opening sequence, with incredible music and graphics, but to a game that is fascinating, fresh, and extremely hard to put away.

The storyline is basically the same as that of the



book and the movie, to which it carries a greater resemblance. The player takes the role of Paul Atreides, who, along with the rest of his family, has just come to the planet of Arrakis—better known as Dune—in order to mine for the most valuable substance in the universe, the spice Melange.

Unfortunately, the House of Harkonnen has had a stranglehold on the spice trade and on the only natives of Dune—the

Fremen—for a long time and do not care for competition. It also doesn't help that the House of Atreides and the Harkonnens are sworn enemies.

The game itself is part animated role-playing and part militaristic-style strategy. As Paul, the player must go throughout the desert landscape in an effort to convince the Fremen natives to help him mine for spice and, eventually, fight for him against the Harkonnens.

A good deal of the game consists of finding new Fremen recruits and mining enough spice to send out to the Emperor, who gave the Atreides permission to come to Dune in the first place. Don't listen to the Emperor, or get him angry with you; he might send out his feared Soudaukar stormtroopers, an outcome likely to result in more than just losing spice.

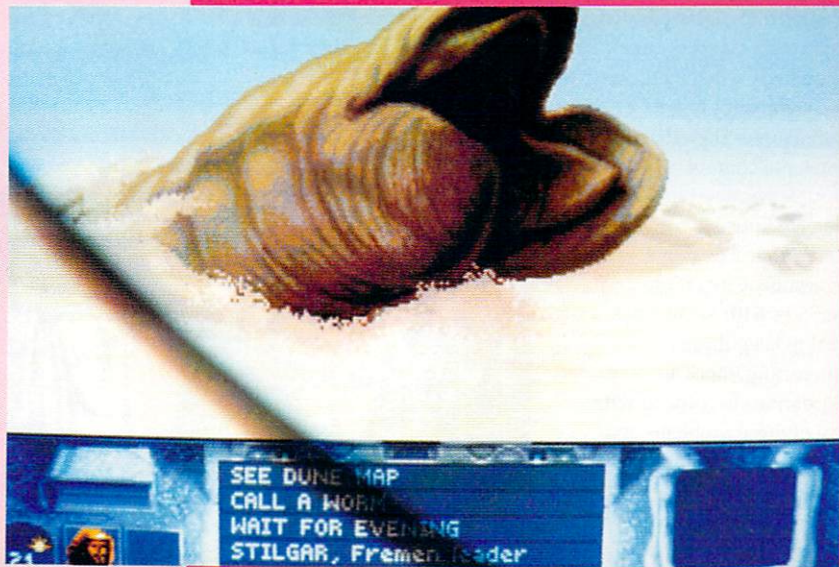
As the game progresses, Paul will find that the exposure to so much spice is actually changing him and giving him strange powers. He will gain the ability to communicate with the Fremen over long ranges, telepathically, and will often



have visions when there is trouble that he should be aware of. All of this adds up to remarkable gaming interest.

Another important facet of the game is that the Fremen hold a dream that someday the desert planet will become a more habitable, life-holding place. Helping the Fremen to carry themselves closer to this goal is an important aspect to the game's completion.

The graphics in the game range from very good to stellar and the music is just incredible, which, incidentally, is actually available on CD. Whenever Paul talks to someone, a closeup of the person appears on the screen, with a comment box beside her.



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Characters respond to you differently, depending on how you treat them. Neglect communing with Fremen too much and they lose confidence in you, but gain the faith of their leaders and they stand behind you unswayingly.

The cast of characters is vast and intriguing and, while there is a rather linear way that the story progresses, the gameplay is very much left up to the player, and gaming options constantly increase as the game progresses. The main complaint I have with the game, however, stems from the fact that once the player has engaged into conversation with a character, he has very little control over the direction of the talking.

Apparently, it's assumed that if Paul is seeking a certain type of information, he automatically inquires about it of them, and if they know anything about it, then they will tell him at some point in the conversation. Also, the responses Paul receives from the characters around him should have been more varied

and animated; instead they sometimes seem very stale and one-dimensional.

Dune looks and sounds great; it also runs very smoothly from floppies and the swapping between its three disks is fairly minimal. From political intrigue and exploration, to military strategy and diplomacy, the range that Dune covers is great. But, even more than that, Dune isn't boring and it doesn't bog down the player with complex instructions, or confusing concepts. In fact, you'll probably barely even need to look at the manual before starting to get into this very time-consuming game.

Dune
Virgin Games Inc.
18061 Fitch Avenue
Irvine, CA 92714
(714) 833-8710
FAX (714) 833-8717
Inquiry # 236

Caesar

by Rob Hays

It seems to me that one of the fastest growing types of entertainment software around is city simulators. The frustrated city planners among us can play "what if..." with street layouts and building placement. Previously we have been able to try our hands at everything from ant farms to railroad empires. With *Caesar*, Impressions Software allows you to play this game in ancient Roman times.

Caesar places the new player as Governor of a Roman Province in 13 B.C. Because the terrain of the Province is randomly generated, every game will be different, even when you are assigned to the same Province. At first, you are the Governor of much empty space,

and you begin by filling some of that space with the basic necessities of life—roads and houses to attract citizens to populate your city, and industries to provide work for your people and pay them wages that can be collected by you as taxes. Soon, your city begins to prosper, more people move in, houses expand, the marketplace grows, and everybody is happy although the water supply is inadequate. Then there is some malcontent causing trouble because his high density housing has deteriorated to slums, everyone wants more services with lower taxes, and to keep things interesting, there are Barbarians to contend with. All of these problems and more confront the would-be Caesar in this two-disk game.

Caesar requires the player to operate in and keep

track of two different levels. In addition to the city level, where you have the above problems to contend with, there is also the provincial level where you must nurture and protect several cities within your province. While there are similar functions in both levels, such as road building, each also has its unique commands. The city level, for instance, includes provisions for

police stations and city walls. At the provincial level you can instruct your army units to patrol certain areas, and build forts and Great Walls.

The main display shows approximately ten percent of the available land area in detail, with a smaller map in the corner showing the entire area. Building development and other actions are automated for you. If you



build houses in a desirable location, more people will want to live there and you can watch as the simple tents you provided expand to houses and then multi-story structures.

All of your actions are carried out with the mouse by clicking on icons along one of several tool bars at the bottom of the screen. If you can't remember what the icons represent, a box shows the function represented as you move the mouse pointer across them. Note that the icon for creating a well is misidentified as a tower. Buildings of all types, from houses to coliseums, are placed in the same manner—click the appropriate icon and the mouse pointer changes to that item. Pick a suitable spot and click the left button once to place the building.

Luckily you are given access to some high-powered assistants to ease the burden of ruling. At any point you can click on the Forum icon and obtain vital information ranging from tax levels and industrial output, to your standing with the Emperor. If you can manage to keep your city from deteriorating or being destroyed by the rampaging Barbarians, the Emperor may decide you deserve a promotion. Hang on long enough and you may even rise to the level of Emperor yourself.

Combat between rampaging Barbarians and your army Cohorts are handled very simply. A screen appears allowing you to choose from four basic tactics. The computer decides who won, based on unit strengths, morale, and your chosen tactic, and then informs you of the outcome. An exception is if you also own Impressions game *Cohort2*. This will allow you to link the two games, giving you total control over combat situations.

Caesar allows the new player to choose from three levels of difficulty, and within limits you can determine your province's initial funding level.



The game can be installed on a hard drive and is not copy protected. While it must be started from the Shell or CLI and does not multitask, Workbench does return intact after playing. Owners of accelerated Amigas will need to turn the CPU caches off when playing, or boot from the floppy. AGA owners must either boot from the floppy, or access their machine's boot menu by holding both mouse buttons while booting. At the boot menu screen, click once on the Display Options button, then

from the Chip Type list select either Original or Enhanced. One MB of RAM is required.

Documentation includes a 30-page tutorial that allows you to begin building quickly, and a 135-page manual with detailed explanations of commands and options. As with other Impressions games I have seen, fully half of the manual is devoted to a historical overview of the period portrayed in the game.

Caesar is extremely playable, and while the non-standard requesters make game

saving and loading more difficult to deal with than need be, you will find yourself spending hours staring at your monitor thinking "What if I tore down the Colosseum and replaced it with an Oracle..."

Caesar
Impressions Software
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Farmington, CT 06032
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FAX (203) 676-9454
Inquiry # 235





COMING

A look at upcoming Amiga games.

HERE'S A SNEAK PEEK at several new Amiga games. Most of them should be available by the time you read this or are on the way. All information for this article was gathered from demo copies, so features are subject to change, but probably not much.

On the heels of last summer's popular movie, the computer version of *Alien 3* (Probe Software) is coming to the Amiga. Unlike most licensed titles, the game doesn't follow the plot of the movie too closely. As Ripley, your task is to blast away the ugly insectoid aliens while rescuing your fellow prisoners in this multi-level platform game. You must be very careful when wandering around, as the lightening-quick aliens often seem to bolt out of nowhere, and it's easy to run out of ammunition. All the technical aspects of *Alien 3* are very good, except for the rather bland graphics.

Reminiscent of *Chuck Rock* (AC V7.4) and *Prehistorik* (AC V7.8), *BC Kid* (Ubi Soft) also draws on the caveman theme. This time the hero is a little boy who looks as though he came from a "Peanuts" cartoon. His objective boils down to rescuing his girlfriend from the dinosaurs by getting through several levels of enemies, his only weapon being his incredibly hard skull. The game play is standard fare, although I liked the kid's ability to climb walls with his teeth. *BC Kid*'s colorful graphics and limited difficulty make it ideal for young players.

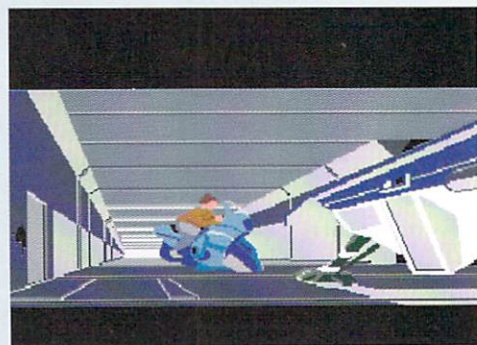
Combat Air Patrol (Psygnosis) is so similar to Electronic Arts' legendary *F/A-18 Interceptor* that you'd think they were both produced by the same developer. Like *Interceptor*, *CAP* has great game mechanics, fast graphics, and multiple views of your airplane. *CAP* goes further by adding detailed airplane animation that can be seen when your view is from the outside of the plane, and it's based on missions during the Persian Gulf War. "Superb" says it best.

Goblins 2 (Coktel Vision) lets you play the parts of Fingus and Winkle, two mischievous goblins who must rescue the stupid Prince Buffoon from a life of servitude as jester to the evil Amoniak. Accomplishing this feat requires solving quite a few logical puzzles, many of which are mind-bendingly challenging or just plain weird. Getting stuck isn't so bad considering that mistakes often have humorous results, none of which are game-ending. The attractive cartoonish graphics, sprightly music, and fluid animation don't change the fact that this game is tough. Recommended for experienced players only.

Gunship 2000 (Microprose) improves upon the original *Gunship*, one of the most popular helicopter simulators. Cockpit graphics are exceptional, as is your maneuverability—a refreshing change from the more rigid controls of an airplane. Random missions



Goblins 2



Out of This World II

ATTRACTIONS

by Henning Valenkamp

prevent boredom, and you have a choice of helicopters. There's even speculation of additional mission disks. Everything works so well that there's little doubt Gunship 2000 is the best helicopter simulator available.

With the release of *Hired Guns*, Psygnosis finally recognized the Amiga's operating system. It's about time they produced a game supporting hard disk installation, the use of extra memory, and friendly interaction with Workbench, although no multitasking. In any case, *Hired Guns* thrusts you into a high-tech future where you, as Rorian Deevergh, and your team of mercenaries are hired to rescue hostages from Graveyard, an aptly named planet. Of course the mission soon evolves into a life-and-death struggle. Amazingly, up to four people can play this role-playing game simultaneously. Each player gets a quadrant of the screen showing his or her character's view on the 3-D world. Besides the usual role-playing stuff, you get an array of powerful weapons, automapping, and great gameplay. This one promises to be an outstanding game.

It seems that a sequel to the critically acclaimed *Out of This World* (Interplay), AC V7.9, is in the works. The demo animation shows a character, probably the physicist Lester Knight Chaykin from the first game, being pursued, ultimately crashing his hoverbike in a jungle. I couldn't glean anything else, except that the developers undoubtedly retained the unique flavor of the original. Let's hope this game is actually released soon.

Road Rash (Electronic Arts), a strangely-named motorcycle racing game, adds a new twist to the genre. Instead of simply trying to cross the finish line ahead of your opponents, you can fight them while careening around the course at high speeds. Take them out by punching them, kicking them, or slamming their motorcycles with your own. You might expect a crash to kill your character, but instead he runs back to his motorcycle to rejoin the race. Excellent control and fast-moving, multi-layered scenery heightens the realism of the game.

Trolls (Flair Software) is another colorful platform arcade game aimed at children. You guide your troll, based on the neon-haired troll dolls sold as novelty items, through his world in search of miniature trolls, balloons, and other miscellaneous things. Difficulty is comparable to *BC Kid*, and there isn't too much violence.

After what seems like an eternity—well over two years—the Amiga version of *Wing Commander* (Origin) is finally here. Everything that made it so successful on the PC has been ported over to the Amiga, except the graphics. The 16-color Amiga version, which could have had 32 colors, relies too heavily on dithering. Perhaps the rumored AGA version will overcome this obstacle. In this game, a race of cat-like aliens called the Kilrathi are at war with humanity, and you are a space fighter pilot in that conflict. Basically, you fly a variety of missions. *Wing Commander's* flight simulation stands out from the crowd by using detailed bitmaps rather than polygon graphics. This could be a landmark game for the Amiga.

•AC•

Please Write to:
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P.O. Box 2140
Fall River, MA 02722-2140



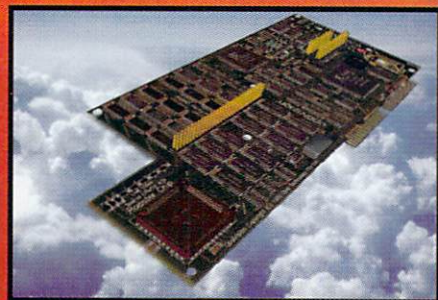
Top: Wing Commander. Above: Combat Air Patrol.

OpalVision

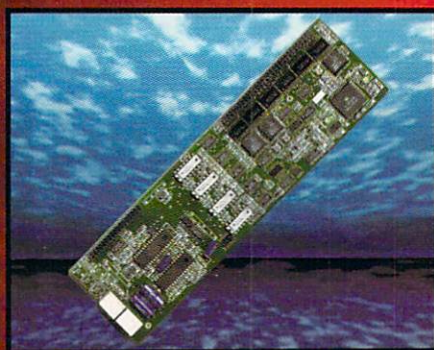
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OpalVision Video Processor™

Plug this card into the OpalVision Main Board and add a wealth of additional features and functionality. It's a high-quality, real-time 24-Bit framegrabber which doesn't require a time-base corrector. And, it's a professional-quality genlocker with chroma and luma keying. The 256-level linear transparency key allows the definition of transparency between two live video sources on a pixel-by-pixel basis for smooth vignettes, anti-aliased text and super-smooth effects. The Video Sandwich key allows you to insert chroma or luma keyed video between definable foreground and background layers of a 24-Bit image. It also provides real-time color processing of live video and an unlimited number of transitions and Digital Video Effects using the included OpalVision Roaster Chip and software. These include cuts, wipes, fades, and special organic effects (soft- or hard-edged), plus an infinite range of flips, tumbles, picture-in-picture, page peels and image wrapping.

OpalVision Video Suite™

This power-packed video and audio mixing, switching and transcoding device connects directly to the Video Processor. This 19-inch, rack mountable unit is so advanced that it has its own internal computer and every aspect is software-controlled for precisely timed and accurate functionality. The Video Suite includes a wealth of inputs and outputs. There are 9 video and 10 audio inputs available, plus the 24-Bit frame store. Professional quality video inputs and outputs are available simultaneously in RGB or Y/R-Y/B-Y, Composite and S-Video. Choose any 2 sources from these inputs, assign a transition or special effect, and then trigger it manually or automatically. All of the transitions and effects provided by the OpalVision Video Processor are available for use by the Video Suite. The linear transparency key (Alpha channel and transparency effects) can be taken from the Video Processor or an external video source, and/or output to another production switcher. This allows transparency control between video sources on a pixel-by-pixel basis. The 10 Audio inputs (five stereo pairs) are fully software-sequenced with smooth fades and full, 5-band frequency equalization.



OpalVision Scan-Rate Converter/TBC

Add this enhancement card to the Main Board and achieve 31Khz, non-interlaced output of Amiga and OpalVision graphics and animations. It also de-interlaces any incoming video source in either PAL or NTSC and includes full time-base correction of incoming video. The on-board memory also serves as a separate frame-store for dual framebuffer applications.

Feature Comparison

OpalVision™ 2.0 (Main Board, Video Processor™ & Video Suite™)

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Supported Broadcast Standards: NTSC PAL	Supported Broadcast Standard: NTSC NO
Inputs/Outputs: 9 Video Inputs 5 Video Outputs Key in/out Master Sync In	Inputs/Outputs: 4 Video Inputs 2 Video Outputs NO NO
Supported Video Standards: Composite Video S-Video Y/R-Y/B-Y (YUV / Betacam) RGB	Supported Video Standards: Composite Video NO NO NO
Audio Mixing 5-Band Equalization 10 Audio Inputs (5 Stereo Pairs) 2 Audio Outputs (1 Stereo Pair)	NO NO NO NO
35ns Character Generator	35ns Character Generator
Compatible with all Amiga 3D software	Includes Lightwave™ 3D
Full-Color, 24-Bit, real-time animation playback in multiple modes	HAM-8, Maximum 256,000 color animation playback generated through Amiga 4000, not the Video Toaster Hardware
Genlock with Luma Keying	Genlock with Luma keying
Chroma Keying on any color	NO
Video Sandwich Keying	NO
Transparency Keying	Transparency Keying
Integrates into the Amiga Environment Frame Buffer accessible by all Amiga Software	Takes over the machine Limited Frame Buffer accessibility to 3rd party software
Numerous pre-set DVE effects Vector-based effects editor for unlimited custom effects.	Numerous, pre-set DVE effects NO
Optional de-interlacing of Video and Graphics	NO
Includes Award-Winning OpalPaint™ software with real-time 32-Bit painting	Includes Toaster Paint™. Operates in inferior quality HAM mode, renders to composite software for viewing
Time-Base Correction unnecessary for Frame Grabbing	Time-Base Correction usually required for Frame Grabbing

"OpalVision is Awesome!"

— Camcorder

"...an enormous range of creative possibilities."

— Computer Graphics World

"State-of-the-Art features"

— Amiga World

"The overall champion of Amiga paint programs."

— Desktop Video World

"The verdict was unanimous...Brilliant."

— Amiga Shopper

"It's a spectacular product"

— Amiga Computing

"The best paint program"

— Amiga Video Journal

"...the finest, most versatile paint package on the Amiga."

— TV Technology

Video Professionals Prefer OpalVision

"We installed the OpalVision Main Board in an Amiga 4000 last September and it has worked very well for our company. In animation work, the ability to show a client motion tests at thirty frames a second via OpalAnimMATE is a great help as well as an outstanding sales tool. Sit a prospective client down and go through four or five past animation projects (playing back in real time with OpalVision rather than using video tape) and you've got a heck of a presentation.

The OpalPaint software is a great timesaver also, turning out beautiful still graphics with ease. The ability to use scalable fonts with Workbench 3.0 puts this system into the Paintbox™ class for rendering fonts. The extremely advanced software and the fact that OpalVision outputs an RGB signal rather than NTSC gives it the edge over the competition. You can output directly to component devices and never go through composite video. At Sinister Video, we researched all the 24-bit systems available and decided on OpalVision. We've never looked back."

— Mac McAlpin, Sinister Video Group, Los Angeles



For information:
1-800-621-2202

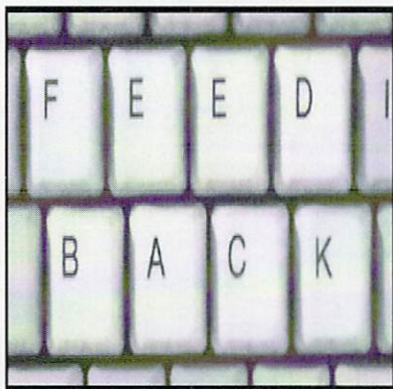
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Created by:
Opal Tech
Sydney, Australia

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Feedback

Letters to the Editor

edited by Paul L. Larrivée

Digital Highway—The Future Is Now!

I read with great interest your last editorial, "Digital Highway," AC V8.7. I just wanted to tell you that what you describe as the future of television has already happened here in Québec, Canada.

The local cable company is called Vidéotron. Its specialty is cable distribution by optic fibers. Now I understand that this isn't something new but has been around for a couple of years or so. However, Vidéotron has started offering its consumers something called Vidéoway. This consists basically of a small box onto which you attach the TV cable and then the TV itself. A remote control is provided the subscriber. The setup is touted as an interactive television set.

What does it do? Let's assume you're watching a hockey game. You can now choose any viewing angle you want just by pressing a few buttons on your remote. Want a rerun of the last score? No problem! Just press those buttons again! You see a product, an ad really, that interests you? Again, press a few buttons and immediately you have additional information on the product. Want to play games with others on the network? There are plenty of games available. And the number of services is growing each day—like being able to check your account at the bank.

Of course, the television networks themselves have to be modified in order to offer these special services. But the technology is already in place.

I just wanted to point out what we have here. Keep up the good work. I very much enjoy your magazine!

Mario Vachon
Montréal, P.Q.
Canada

In these days of enterprise and entrepreneurs, it takes no time for a new technology to establish itself in our culture.—Editor

A Few Words to Commodore Upper Management

Commodore can't afford to ignore the business market. Multimedia is not a market unto itself. Multimedia will sell only if the combined package provides a *real-world solution to the end user*. It must make the lives of end users easier, reduce mistakes, or provide a way for them to make lots of money. The reason that the Amiga has succeeded in the video market is that it does just that. However, video and kiosks are a limited market. The projections of growth in the video market are based on the assumption that companies will do their own in-house video work instead of paying some outside firm to do it.

The Amiga will be able to capture that growth if they have enough presence in the business market to be trusted by businesses. Businesses in the U.S. like to think they are open-minded. The truth is that they are

very conservative. Unless they recognize the name and know the reputation of a product, they will not buy it. Instead, they will pay one-hundred times more for something that is one-hundred times less capable just so that they can feel comfortable with it. This is how Mac and IBM platforms are succeeding in eroding Commodore's market share in the video market with products that are less capable.

Commodore has attempted to get the Big Name companies to develop products for the Amiga. There are many reasons why these attempts have failed. The question here is, why do we need these big name companies? If asked, most people would say it is because the Amiga needs the credibility that a Big Name provides.

However, if you look at the issue from the point of view of a business, you can see the real answer. Most people work as part of a team. These people exchange information every hour of every day. A business can't afford the hassle and delays associated with retyping and reformatting documents when they are transferred between programs. The result is that the company forces everyone to be the same. The business does not so much care about the specific package *as it does care about the data*. If the Amiga is capable of *transparently* sharing data with the Big Name packages, then it has a chance.

What Must Be Done:

1. Commodore *must* compete in the business market. Apple Computers did not succeed by throwing up their hands and saying, "We can't compete in that market," as Commodore has done. This market has a big influence on the home and video markets. People want to be able to take their work home, and in-house video workers need to be able to share the work done by others in the company.

2. Commodore *must* advertise—blanket advertisements to get the name Amiga respected and recognized. You can't target only those areas where there are Amiga dealerships. There must be fertile ground to enable Amiga dealerships to crop up in new areas.

3. Advertisements *must be conservative*. Cartoon-type ads don't endow a computer with company respect. They get blown off by serious businesses because they believe the ads are for Nintendo-like machines. The successful strategy for the C-64 will not work in this day and age. The evidence is all around you, Commodore!

Ronn F. Black
Westerville, OH 43081

These same sentiments have been expressed in bits and pieces, here and there. This is probably the first time we've seen the ideas put together so cogently all in one place. Let us hope passionately that someone is paying attention before it's too late!—Editor

Please write to:

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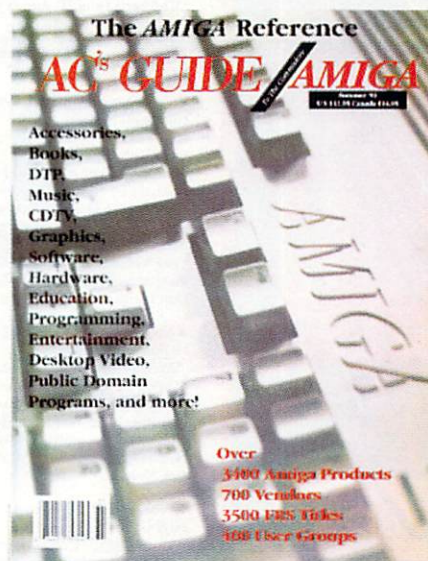
Readers whose letters are published will receive five public domain disks free of charge.

**Don't be the dunce in
your group! Instead
become the
sophisticated,
knowledgeable Amiga
user who, of course,
you basically are.**

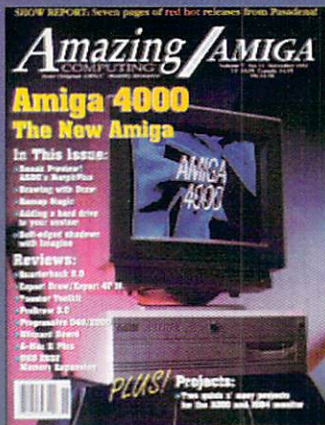
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AC's Back Issue

I n d e x

Vol.7 No.4 April, 1992

Highlights include:

"Foundation", a review by Dave Spitler

"AdPro 2.0", review by Merrill Callaway

"ATonce Plus", review by Rich Mataka

Also, construct a database using your favorite authoring system, customize your start-up sequence, and create and produce your own video!

Vol.7 No.5 May, 1992

Highlights Include:

"Pelican Press", a review of this entry-level DTP package by Jeff James

"AdIDE/40 Amiga 500 Hard Drive Kit", review by Merrill Callaway

"Building an Amiga MIDI Interface", super project by John Iovine

Also: AC's annual Desktop Publishing Overview! This issue includes a look at the top DTP packages as well as a study of printers, fonts, and clip art available for the Amiga.

Vol.7 No.6 June 1992

Highlights Include:

"Freeze Frame Video Recorder", review by Merrill Callaway

"HP DeskJet Color 500C", review by Richard Mataka

"MREAD", a programming project by Chuck Wardin

Plus: Don't miss an exciting edition of our ARExx feature by Merrill Callaway or 3-D animation with DPaint IV in "The Video Slot", by Frank McMahon.

Vol.7 No.7 July 1992

Highlights Include:

"Modem Rundown", A comprehensive look at modems for the Amiga

"G-Force 040", a review of GVP's 040 accelerator, by Rich Mataka

"SuperJam", a review of this superb music maker from The Blue Ribbon Soundworks, by John Steiner

"Foundex", a tutorial using Foundation's stacks and scripts, by Dave Spitler

Plus, a look at telecommunications and the Amiga including hardware, software, and services.

Vol.7 No.8 August, 1992

Highlights Include:

"Digi-View 4.0", by Matt Drabick

"GVP's Digital Sound Studio", review by Matt Drabick

"3D Effects from 2D Amiga Art", tutorial by Shamms Mortier

Plus: Super ARExx Column for July!

Video Toaster UpDate featured in The Video Slot!

And Much More!

Vol.7, No.9, September, 1992

Highlights include:

"Professional Calc.", review of Gold Disk's premier accounting software by Bill Frazier.

"True Basic 2.0" A review of the latest release of the True BASIC language by Paul Castonguay.

"Developing Desktop Savvy," a special project for your favorite DTP software. Using specialty papers to create brochures and pamphlets, by Pat Kaszycki.

"The Video Slot" This month, learn about the new features of Imagemaster, by Frank McMahon.

Don't miss AC's super game coverage in Diversions.

Vol.7, No.10, October 1992

Highlights Include:

"Amiga Warrior," Commodore's newest Amiga is a fighter capable of bringing the best of the Amiga to the American consumer.

"MegagameM's CellPro," a review by Merrill Callaway.

"Multi-colored Text in DPaint III," A tutorial to produce dazzling effects with your text, by George Haasjes.

"Game Creation with AMOS," create your own Amiga game, by Jack Nowicki.

Vol.7, No.11, November 1992

Highlights include:

"Amiga 4000," Commodore creates a bold new direction in Amiga computing with expanded graphic resolutions, modular CPU, and more

"Progressive 040/2000," a review by Rick Mataka.

"Remap Magic," Learn why this tool is your best bet for making use of your palette.

"Beginning C," Chue Xiong covers some of the basics of the C language.

"Banners," A tutorial on creating banner-length printouts, by Pat Kaszycki.

Vol.7, No.12, December 1992

Highlights Include:

"Polishing Basic Programs," Marianne Gillis shares the secrets of BASIC programming experts.

"Banners," A tutorial on creating banner-length printouts, by Pat Kaszycki.

"Structured Drawing & TueBASIC," paul Castonguay shows how TrueBASIC fully supports any level of hierarchical structure.

Also, complete reviews of Voyager 1.1, PIXOUND, VistaPro 2.0, and OpalVision.

Vol.8, No.1, January 1993

Highlights Include:

"Creating a Storyboard in Final Copy," see how to layout your animation storyboard in Final Copy, by R Shamms Mortier.

"A Look at 24-bit Libraries," Shamms Mortier looks at 24-bit libraries.

"Using Laser Disk Players with the Amiga," Rom Battle examines the benefits of laser disks as a source of video images. He also shows an easy way to set them up.

Plus: A complete review of the new A1200 & coverage of Comdex Fall 92 & the FES-London.

Vol.8, No.2, February 1993

Highlights Include:

"Extending the AMOS Sort," Dave Senger looks at the AMOS sort function.

"Business Cards," Soft-Logik's Dan Weiss gives an in-depth tutorial on how to create your own business cards.

"AD1012," a review by Rick Manasa.

AND! A special sneak preview of the One-Stop Music Shop from Blue Ribbon & complete coverage of the WOCA Toronto!

Vol.8, No.3, March 1993

Highlights Include:

"Babylon 5," the Amiga changes the way TV shows are made, by les Paul Robley

"AmigaVision Projects," by William Murphy

"Art Expression," review by Merrill Callaway

PLUS: Creative business forms & CES Winter '93

Vol.8, No.4, April 1993

Highlights Include:

"TriplePlay Plus & SyncPro", reviews of two great music products by Rick Manasa

"CanDo," a review of the application development system from INOVATronics, by Rob Hayes

ALSO: Super VideoSlot for April, ARExx, di, and great Diversions!

Vol.8, No.5, May 1993

Highlights Include:

"Directory Opus", review of the latest version of Directory Opus and a start-up tutorial by Merrill Callaway

"Media Madness," explores the inside of Blue Ribbon Soundwork's new Media Madness, by Todor Fay & David Miller

"SuperJAM 1.1," a review of the latest release of SuperJAM! by Rick Manasa

"ImageFX," review by R. Shamms Mortier

ALSO: Super VideoSlot for May—The New Graphics Modes!

Vol.8, No.6, June 1993

Highlights Include:

"AMOS Turns Professional", review of a major upgrade hailed as a comprehensive development system, by Jimmy Rose

"Searching Medical Literature," using the Amiga to tap the vast resources of medical on-line services, by Dr. Michael Tobin

ALSO: Newsletter Design, ARExx Programming, Hot Diversions

Vol.8, No.7, July 1993

Highlights Include:

"TypesMITH 1.0", review of Soft-Logik's new font editor, by Merrill Callaway

"OpalPaint 2.0," review of the latest version of this paint program for the OpalVision board, by R. Shamms Mortier

"Structured Drawing," basic features and advanced techniques, by Dan Weiss

"DeluxePaint IV AGA," review of the latest paint package for the AGA machines, by R. Shamms Mortier

ALSO: Super VideoSlot, ARExx, and New Products!

Vol.8, No.8, August 1993

Highlights Include:

"Amiga Vision Professional", review Commodore's upgraded authoring system, by Douglas J. Nakakihara

"Art Department Profesional 2.3," review of the latest release of AdPro from ASDG, by Merrill Callaway

"Professional Page 4.0," the latest incarnation of Pro Page, by Rick Manasa

"Pseudo Radiosity Effects," why ray tracing is not an accurate model of true light behavior, by Mark Hoffman

"T-Rex Professional", a review of the latest release of T-Rexx from ASDG, by Merrill Callaway

ALSO: AC Phone Book: A directory of Amiga Developers!

AC's TECH, Vol. 2, No. 1

Highlights Include:

"Build Your Own SCSI Interface" by Paul Harker
 "CAD Application Design—Part III" by Forest Arnold
 "Implementing an ARexx Interface in Your C Program" by David Blackwell
 "The Amiga and the MIDI Hardware Specification" by James Cook
 —and more!

AC's TECH, Vol. 2, No. 2

Highlights Include:

"Programming the Amiga in Assembly Language Part 2", by Forest Arnold
 "Implementing an ARexx Interface in Your C Program, Part 2", by David Blackwell
 "Iterated Functions Systems for Amiga Computer Graphics", by Laura Morrison
 "MenuScript", creating professional looking menus easily and quickly, by David Ossorio
 And Much More!

AC's TECH, Vol. 2, No. 3

Highlights Include:

"HighSpeed Pascal," by Dabid Czaya.
 "PCX Graphics," by Gary L. Fait.
 "Programming the Amiga's GUI in C—Part 5," by Paul Castonguay.
 "CAD Application Design Part 4," by Forest W. Arnold.
 And Much More!

AC's TECH

AC's TECH, Vol. 2, No. 4

Highlights Include:

"In Search of the Lost Windows," by Phil Burke
 "No Mousing Around," hide that annoying mouse pointer with this great program, by Jeff Dickson.
 "The Joy of Sets," by Jim Olinger
 "Quarterback 5.0," a review by Merrill Callaway.

AC's TECH, Vol. 3, No. 1

Highlights Include:

"Comeau Computing's C++," A review of this great new C compiler by Forest Arnold.
 "Programming the Amiga in Assembly Language Part 5," by William Nee
 "Make Your Own 3D Vegetation," Laura Morrison shows how to use iterated functions to create 3D trees and plants.
 PLUS! The HotLinks Developer's Toolkit ON-DISK!

AC's TECH, Vol. 3, No. 2

Highlights Include:

"Ole," An arcade game programmed in AMOS BASIC, by Thomas J. Eshelman.
 "Programming the Amiga in Assembly Language Part 6," by William Nee
 "Wrapped Up with True BASIC," Text and Graphics wrapping modules in True BASIC, by Dr. Roy M. Nuzzo
 "ARexx Disk Cataloger," An AmigaDOS manipulator that produces a text file containing information about the floppy disks you want cataloged, by T. Darrel Westbrook
 AND LOTS MORE ON DISK!

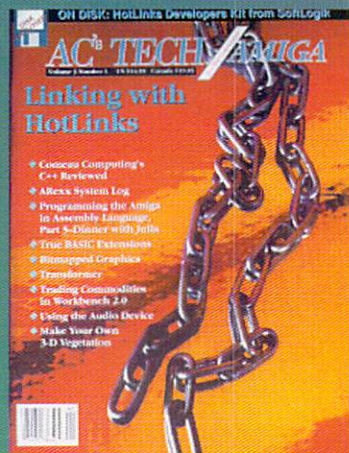
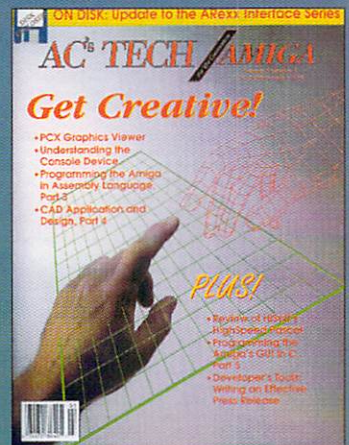
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WHAT HAVE YOU BEEN MISSING? Have you missed information on how to add ports to your Amiga for under \$70, how to work around *DeluxePaint*'s lack of HAM support, how to deal with service bureaus, or how to put your Super 8 films on video tape, along with Amiga graphics? Do you know the differences among the big three DTP programs for the Amiga? Does the ARexx interface still puzzle you? Do you know when it's better to you use the CLI? Would you like to know how to go about publishing a newsletter? Do you take full advantage of your RAMdisk? Have you yet to install an IBM mouse to work with your bridgeboard? Do you know there's an alternative to high-cost word processors? Do you still struggle through your directories?

Or if you're a programmer or technical type, do you understand how to add 512K RAM to your 1MB A500 for a cost of only \$30? Or how to program the Amiga's GUI in C? Would you like the instructions for building your own variable rapid-fire joystick or a 246-grayscale SCSI interface for your Amiga? Do you use easy routines for performing floppy access without the aid of the operating system? How much do you really understand about ray tracing?

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AC's GUIDE**

The Fred Fish Collection

Below is a listing of the latest additions to the Fred Fish Collection. This expanding library of freely redistributable software is the work of Amiga pioneer and award winning software anthologist, Fred Fish. For a complete list of all AC, AMICUS, and Fred Fish Disks, cataloged and cross-referenced for your convenience, please consult the current **AC's Guide To The Commodore Amiga** available at your local Amazing Dealer.

Fred Fish Disk 859

DCmp A utility that allows you to compare two disks block by block. Written in order to check the reliability of the Video-Backup-System (VBS), DCmp can create a file containing a list of differing sectors which can be used in conjunction with a disk-editor to correct the defects. Version 1.51, an expert mental release. Works with all Amigas using Kickstart 1.3 or higher and supports reqtools/library. Also comes with Cmp, a file compare utility. Includes C-source. Author: Tobias Ferber

DirKing A very powerful replacement for the AmigaDOS 'List' and 'Dir' commands. It gives full control on the format of the directory listing and what information should be printed. The directory can be sorted on any field, or on several fields in the order you want. Supports many filters, such as name and date, and the filters can be made effective on files only, directories only or on both. You can also define a pattern for each level of the directory tree. Has an LFORMAT option which is useful for generating scripts. A unique feature is the ability to monitor the scanning process. English version supplied, German, French and Dutch versions available from the author. Version 2.12e, an update to version 2.11e on disk number 784. Binary only, shareware. Author: Chris Vanderendock

NewDate A replacement for the AmigaDOS 'Date' command. Besides the usual date options, NewDate enables date output in your own defined format. NewDate also supports English, German, French, Dutch, Italian, Spanish, Danish, Finnish and Polish datenames. Version 1.10, binary only, freeware. Author: Chris Vanderendock

PARex Replace strings in any file, whether plain text files or pure binary files. By using scripts you can define any number of search and replace strings to be used for processing a file. You can use all ASCII codes when defining these strings, so non-printable characters are no problem. PARex makes patching files very easy. Version 2.12, binary only, shareware. Author: Chris Vanderendock

PPMC The Powerpacker Mini Clone. PPMC is a powerpacker library meeting gadtools library. It's a OS2.0+ utility, useful for packing and unpacking text and data files. It has a complete CLI interface and is localized under OS2.1 and higher. This is version 1.2c, an update to version 1.2b on disk 812. Some new enhancements as the multiple file packing and/or unpacking under Shell and many code optimizations. Includes Danish, Dutch and French catalogs, a 68030 version, hypertext documentation and source for SAS/C. Author: Reza Elghazi

Fred Fish Disk 860

AzMake A work environment for Aztec C. You can compile, assemble, link, print, etc. your programs by clicking a gadget. Typing in the Shell is out. Version 2.3, an update to version 1.1 on disk number 586. Binary only, shareware. Author: Christian Friedel

bBaseII An easy to use, versatile, yet full featured database program. Search or sort on any field, (un)delete records, print mailing labels or envelopes, get printed in many formats, scramble files, flag records, and more. Fields are user-configurable, so bBase can be used to keep track of addresses, tape or video collections, recipe files, or anything else you can think of - one program does it all! bBaseII is a greatly enhanced successor to bBaseI. Version 1.1, an upgrade to bBaseI, version V5.5 on disk 710. Binary only, shareware. Author: Robert Bromley

CConvert A utility to convert IFF files to raw bitplane data. It features options to create sprite data lists or interleaved bitmaps. It can generate RAW files as well as linkable object files. Version 1.82. Includes source in assembler. Author: Klaus Wissmann

LazyBench LazyBench is a utility for lazy people with a hard disk cram med full of goodies which are difficult to reach because they are buried away in drawers inside drawers inside drawers in side drawers... Supports tools and projects and both OS 1.3 and OS 2.xx versions are supplied with this distribution. LazyBench for the OS 1.3 opens a little window on the Workbench screen and delivers a fully configurable menu which brings up to 30 applications at your fingertips. LazyBench for the OS 2.xx adds an item under the Workbench

"Tools" menu, installs itself as a Commodity and waits in the background. Use its hot key combination to pop its window and then select an application from a list of up to 100 applications. Versions 1.01 (OS 1.3) and 1.04 (OS 2.xx), an update to the version 1.00 on disk number 839. Binary only. Author: Werther 'Mirco' Pirani

Minterm Minimizes boolean algebra formulas. Minterm can minimize formulas with up to 15 variables. Version 2.0 for AmigaOS 2.04 or higher. An old version (1.1) is included for users still requiring OS 1.2/1.3 compatibility. Binary only. Author: Achim Pankalla

SysInfo A brand new release of this popular program. It reports interesting information about the configuration of your Amiga, including some speed comparisons with other configurations, versions of the OS software, and much more. Version 3.18, an update to version 3.11 on disk 820. Binary only. Author: Nic Wilson

Fred Fish Disk 861

AskReq Yet another batchfile requester, similar but unrelated to the program of the same name on disk number 827. Opens up a window, displays a message and solicits a Yes/No type answer from the user. Requires OS2.x, version 1.00, both English and German versions and includes source in C++. Author: Harald Pehl

KingFisher A specialized database tool providing maintenance and search capabilities for the descriptions of disks in the format used by this library. KingFisher's database can span multiple (floppy) disk volumes, can be edited by text editors that support long text lines, can add disks directly from unedited email or usenet announcements, can remove disks, rebuild a damaged index, find next or previous software versions, print or export (parts of) the database, and more. Includes a database of disks 1-850. This is version 1.30, an update to version 1.15 on disk 808. Binary only. Author: Udo Schuermann

Fred Fish Disk 862

BEAV "Binary Editor And Viewer", is a full featured binary file editor. Just about any operation that you could want to do to a binary file is possible with BEAV. You can: Insert or delete in the middle of a file thereby changing its size; Edit multiple files in multiple windows and cut and paste between them; Display and edit data in hex, octal, decimal, binary, ascii, or ebcdic formats; Display data in byte, word, or long word formats in either Intel or Motorola byte ordering; Send the formatted display mode to a file or printer. The display and keyboard handling functions for BEAV are based on microemacs. Version 1.40, portable, and includes source and makfiles for several other systems. Author: Peter Reilley, Amiga port by Simon J Raybould

BioRhythm An intuition based easy-to-use program that shows your 3 basic BioRhythms plus the average "rhythm". Take a look, dump it to your printer and make your plans for "when to do what". This is version 2.2, an update to version 1.0 on disk 759. This version has some new features and is 400% faster. Binary only, PAL version. C-Source available from author on request. Author: Thomas Arnfeldt

GlobeAnim An animation which displays a smoothly rotating earth. Includes separate versions for both PAL and NTSC systems. Author: Hannu Mikkola

PhoneList Simple phone list database, unique in the fact that it allows easy usage from either the Workbench or CLI. Allows you to add, delete, search and create an alpha-sorted list. Author: Michael Hoffmann

ScopePrint Simple program for displaying/printing Oscilloscope simulations of sine and square waves. Presents you with a two-channel o-scope and allows you to input the frequency, phase, and amplitude of the signal(s). Version 1.0, binary only. Author: Wim Van den Broeck

Fred Fish Disk 863

GuArc A graphical user interface for cli-based archivers like lha, arc, ape, zoo, etc. It has the 'look & feel' of a directory tool and can perform all basic actions on archives, such as Add, Extract, List, Test, Delete, etc. You can enter archives as though they were directories. You don't have to know anything about archivers. Fully configurable (Archivers not included). Version 1.10, requires AmigaDOS 2.0+, freeware, binary only. Author: Patrick van Beem

Luffar The game of Noughts and Crosses, the object is to get exactly five "Noughts" (six doesn't count!) in a row up/down/across or diagonally, before your opponent gets five "Crosses" in a similar fashion. 0, 1 or 2 human players, rewind and ahead buttons. Version 1.0, freeware, binary only. (Source available from author). Author: Magnus Ennasson

Lyr-O-Mat A simple, fun program designed to generate sentences out of a word list and a sentence pattern database. German and English database included. Version 1.0, Binary only. Author: Karlheinz Klingbeil of CEKASOFT

MPE A compiler tool for users of the M2amiga programming environment. MPE does the same job better than your batch file. You can do everything with the mouse or the right amiga key. With this Modula-2 Programming Environment you can compile, link, and run your program. When there is

an error, the editor is started automatically. You can set all switches for M2C, M2L M2Make, M2Project, and M2LibLink. This is version 1.60, an update to version 1.38 on disk 766. Binary only. Author: Marcel Timmermans

NetMount A tiny application that simplifies the ParNet mount procedure. You need ParNet (see disk 400) from The Software Distillery to use NetMount. Binary only. Author: Tobias Ferber

Noisome A commodity that allows you to play sound samples when a key or mousebutton is pressed, or a disk is inserted or removed. You can have different samples for the space and return keys as opposed to other keys, special samples for the mousekeys, a sample to be played instead of the visual display "beep" and more... The samples are played in mono or stereo, and two can be played simultaneously. The audio allocation priority can also be set. Includes several sound samples. Version 1.0, binary only. Author: David Larsson

PowerPlayer A very powerful, user friendly and system friendly module player. It can handle nearly all module-formats, can read powerpacked & xpk-packed modules and comes along with its own powerful cruncher that uses the h.library. Has a simple to use interface and an ARExx port. Version 3.9, a major update to version 3.4 on disk 769, binary only, now shareware. (Previous versions were freeware.) Author: Stephan Fuhrmann

Fred Fish Disk 864

Change Small CLI-only program to translate numbers from one numbering system to another. Binary, octal, decimal and hexadecimal numbers are supported. Version 1.00, includes source in C++. Author: Harald Pehl

MouseAccel Yet another mouse accelerator, this one implemented as a commodity. If you find the built-in accelerator too slow, try this one. Requires at least AmigaOS 2.04. Version 1.07, an update to version 1.01 on disk 497. Includes german version and source in C. Author: Stefan Sticht

SCAN800 A specialized database program to store frequencies and station names for shortwave transmitters. It can also control a receiver for scanning frequency ranges. Version 2.33, an update to version 2.28 on disk 812. Binary only. Author: Rainer Redweik

Fred Fish Disk 865

AntiCidVir A link virus detector and exterminator. Also detects other types of viri. This version can detect: 126 Bootblock; 12 Link; 23 File; 5 Disk-Validator; 3 Trojans; and 3 Bombs; Automatically checks each inserted disk for bootblock and disk-validator viruses. Can scan all files of a specified directory for known link viruses, and constantly monitors memory and system vectors. Version 2.0, an update to version 1.8 on disk 842. Shareware, binary only. Author: Matthias Gutt

Back&Front Sends a window to the back or bring it to the front with defined actions. For example, bring a window in front by double-clicking in it and send it back with the middle mouse button. Any keyboard or mouse event can be trapped. Number of required actions can be changed (double-click vs tripleclick). Implemented as a commodity. Requires at least AmigaOS 2.04. Version 1.09, an update to version 1.03 on disk number 497. Includes german version and source in C. Author: Stefan Sticht

Genealogist Arjay Genealogist is a specialized database for keeping track of genealogical information. It features a full, easy to use intuition interface. The program is totally non-sexist and secular in nature, and correctly handles multiple marriages, "unconventional" marriages, adopted children, and unmarried parents. The printed reports include descendant and pedigree charts, personal details reports, family group sheets, and index lists of people and families. Free-form note files can be created using any editor, and IFF pictures can be viewed using any IFF viewer, from within the program. Other features include dynamic on-screen ancestor and descendant charts, extensive online context-sensitive help, flexible "regular expression" searching, and multiple ARExx ports with an extensive command set. Up to 1000 people per database, with databases held in RAM for maximum speed and responsiveness. PAL or NTSC, AmigaDOS 2.04+ required. 1 Meg RAM recommended. Version 3.04, binary only. Author: Robbie J Atkins

Fred Fish Disk 866

CFX Crunched File eXaminer allows the user to examine and find files using several different search criteria. CFX knows a huge amount of the current Amiga filetypes, including a vast number of "cruncher" types. CFX can also give in-depth disassemblies of crunched files, including most actual crunched files, relocater crunched files, and some major archive crunched types. This version requires kick 1.3 or 2.0. Version 5.275, an update to version 5.242 on disk number 750. Binary only, freeware. Author: Bob Rye and Marcus Mroczkowski

Degrader Degrades your machine to try and get badly written programs to work. Allows you to block memory, add non-autoconfig memory at reset, turn audio filter on or off, intercept privilege violation errors, switch off cache/burst modes and can slow down a fast machine. Also can swap the boot drive and force 50Hz or 60Hz. Will do things straight away, after one reset or after every reset. Version 1.30, an update to version 1.00 on disk number 562. Binary only. Author: Chris Hames

DRED The Disk REDucer. This program allows the user to arrange data on a set of disks using a best fit algorithm. If you have ever found it difficult to figure just which files should go onto which floppy, then DRED is for you! Most of the time (there are exceptions!) you can achieve 99% fullness of floppies/media. Requires kick 1.3 or 2.0. Version 2.003.007, binary only, freeware. Author: Bob Rye, Marcus Mroczkowski and Brett O'Callaghan

Floozzy Disassembles the Floozie FidoNet mail management system logfile into readable, human understandable statistics. Floozzy's output is clear and concise and fully covers all aspects of Floozzy use. All message base names, number of messages, and in/out packets/bytesizes are noted and further stats are calculated on these figures. Requires kick 1.3 or 2.0. Version 1.0204, binary only, freeware. Author: Bob Rye

Oscillogrph An emulation of an oscillograph, with five internal signal generators. The internal signals can be freely edited, even mathematical functions can be used. External signals can be used when a digitizer is connected to the Amiga. This program can be used for learning, demonstration, and even simple technical applications. The german original and the english translation are included, as well as a set of oscilations. Version 2.0, binary only. Author: Michael Gentner

PC-Task Demo PC-Task is a software IBM-PC emulator. It allows you to run the majority of IBM-PC software on your amiga with no additional hardware. Runs just like a normal application allowing multitasking to continue. The program has a graphical user interface and no additional filesystem/device mounting is required. A few clicks with the mouse and it is operational. VGA, EGA, CGA, MDA, Serial, Parallel, Mouse, 2 Floppy drives and 2 Hard drives are emulated. The hard drives can be partitions or hard drive files like the bridgeboard can use. This is the demonstration version 2.01 full version is available from the author. Binary only. Author: Chris Hames

Xerox4054A Printer driver for printers supporting the Xerox 2700 command set. The 4045 (a hulking 8 PPM laser unit), is probably the most popular member of this family, so it got the name. The focus of this version was to get the dot graphic functions working. This appears to be working correctly as printing from Professional Page V2.1 and Tax Break have been successful in 300X300 graphics mode. Version 1.0. Author: Bob Schuchman

Fred Fish Disk 867

CenterScreen A commodity which centers the frontmost screen horizontally on keyf. Useful if you normally operate with overscan screens and an old program opens a normal size screen. Requires at least AmigaOS 2.04. Version 1.07, an update to version 1.03 on disk 497. Includes german version and source in C. Author: Stefan Sticht

ComplexPlot Allows the transformation of a drawing by a complex function. The drawing can be edited with the mouse (line, circle and fill modes included), and generators for cartesian and polar nets can be used. The freely editable complex function then changes the drawing in many interesting ways. Both english and german versions are included (and some demo drawings). Version 1.0, binary only. Author: Michael Gentner

DeluxePacMan A pacman type game. Commercial quality, with excellent graphics and responsiveness. Automatically adjusts to either PAL or NTSC. Can be controlled with a joystick, mouse, or keyboard. Written in assembly. Version 1.4, an upgrade to 'PacMan' on disk 717. Shareware, binary only. Author: Edgar M. Vidgal

GetDate A small program that allows users with an A500 or A1000 without a Battery backed-up clock to set the date and time from the startup-sequence. The user is prompted for the current date and time. The last date/time entered becomes the default for the next boot. Binary only. Author: James Weir

LeftyMouse Yet another LeftyMouse, this one implemented as a commodity. Swaps the left and right mousebutton for lefties. Requires at least AmigaOS 2.04. Version 1.06, an update to

- version 1.04 on disk 497. Includes german version and source in C. Author: Stefan Sticht
- Fred Fish Disk 868**
CDTV-Player A utility for all those people, who'd like to play Audio-CD's, while multitasking on workbench. It's an emulation of CDTV's remote control, but is a little more sophisticated. Access to the archive even without a CD-ROM-Drive (i.e. AMIGA 5004000), although you can't play a CD. PROGRAM & KARAOKE (live on-screen) included. Recognizes CDs automatically. AREXX-Port for usage in other programs. Version 2.0, an update to version 1.8 on disk number 849. FISH-WARE, binary only. Author: Daniel Amor
- MouseBanker** Blanks the mouse pointer after a defined timeout or if you press any key. Implemented as a commodity. Requires at least AmigaOS 2.04. Version 1.21, an update to version 1.13 on disk 497. Includes german version and source in C. Author: Stefan Sticht
- Request** Opens the OS 2.0 autorequester from script files. Title, text, gadgets and pubscreen of the requester can be changed by commandline options. Requires at least AmigaOS 2.04. Version 1.04, an update to version 1.00 on disk 497. Includes source in C. Author: Stefan Sticht
- RussianFont** Three Russian Vector Fonts, with a special Russian keypad that matches the Russian typewriter. These fonts are compatible with Russian Fonts found under WINDOWS (→ easy exchange). Version 3.0, update to version on disk number 805. Designed with FontDesigner. Binary only, shareware. Author: Daniel Amor
- S Maus** A highly configurable "SUN-mouse" utility, implemented as a commodity with a graphical user interface. It activates the window under the mouse pointer if you move or after you have moved the mouse or if you press a key. You can specify titles of windows which shall not be deactivated using wildcards. Requires at least AmigaOS 2.04, uses locale.library if available. Includes english and german docs, german catalog file. Version 1.17. Shareware, binary only. Author: Stefan Sticht
- Fred Fish Disk 869**
Clock A simple Clock program but with the handy feature that you can "snapshot" the clock to stay with any screen or it can be free to pop to the frontmost screen automatically. Up to 4 alarm times can be set, which can simply put up a requester or cause some program to run in background. Hourly chimes can also be made to run a program (i.e. a sound sample player). Uses locale.library with OS2.1+ Version 2.00, binary only. Author: Bernd G-mwald
- CL_SEP2** This is the September 1992 release of CheatList for the Amiga. Cheatlist is a collection of various forms of help (cheats, hints, codes, etc.) for Amiga games. Included in the package is PokelList, a similar file which details pokes usable with the Action Replay cartridge. The September release covers 500 games, and on average, another forty games are added each release. Shareware. Author: Various, compiled by Peter Monk
- Uhr** A small configurable digital clock (Uhr is german for "clock"), that makes use of the FormatDate() function in WorkBench 2.1's locale.library. Requires at least Kickstart 2.04 and WorkBench 2.1. Version 1.03, an update to the version on disk 757. Includes source in C. Author: Stefan Sticht
- Fred Fish Disk 870**
AmigaGuide Archive distribution of the AmigaGuide hypertext utility direct from Commodore. Contains developer examples and tools for AmigaGuide under V34/V37 and V39, plus a new free print/sign/ send-in distribution license for AmigaGuide, amigaguide.library, WDIplay, and their icons. Author: Commodore Business Machines
- FollowMouse** A pair of small blinking eyes following the mouse movements on the screen. Runs from both the WorkBench and CLI. Version 1.2, an update to the version on disk number 757. Includes source in PASCAL. Author: Kamran Karimi
- Installer** Archive distribution of the Amiga Installer utility direct from Commodore. Contains V1.24 of the Installer, documentation and examples for developers to use when developing their software. Also contains various enhancements and fixes detailed in the documentation enclosed. The documentation has also been enhanced and brought up to date. Author: Commodore Business Machines
- SoftProtect** A software disk write-protection. With the permission of the user, disables floppy writes even on write-enabled disks. Switches to enable/disable states with a gadget. Runs from both WorkBench and CLI. An update to 'AskFirst' on disk number 753. Includes source in assembly. Author: Kamran Karimi
- StackCheck** A program that determines the maximum stack usage of another program. It uses a completely different method than all the other stack-watching programs like WatchStack or Xeper and is very reliable. In most cases it does not require any CPU time to do its work. Version 1.0, includes source for Atxex C and GNU C. Author: Günther Röhrich
- SWAP** Memory management may be considered as one of the weak points of Amiga OS. SWAP was written as a trial to provide swapping for Amigas without any special hardware. The main intention is to let the user choose a task, swap it to disk so that its occupied memory is released,
- and do other things. Later on, he could swap the program back to main memory and let it continue from the point it was interrupted. Includes source in C and assembly. Author: Kamran Karimi
- WindowShuffle** Activates and brings to front next or previous window with hotkeys. Hotkeys can be changed. Implemented as a commodity. Requires at least AmigaOS 2.04. Version 1.07, an update to version 1.05 on disk 497. Includes german version and source in C. Author: Stefan Sticht
- Fred Fish Disk 871**
ABackup A very powerful backup utility that may be used both for hard disk backup and for file archiving. Has a full Intuition interface, a "batch" mode, can save/load file selection, handle HD floppies, use any external compression program, etc... Includes both English and French versions. Version 2.43, an update from version 2.40 on disk 838. Shareware, binary only. Author: Denis Gounelle
- DlmpWin** A GUI interface for Disk-Imploder (included) by A.J. Brouwer. Dlmp is one of the most efficient disk archivers available for the Amiga. It offers 7 different levels of compression, the ability to create self-extracting archives, MULTIPLE CYLINDER RANGES, ability to work with any floppy compatible device (such as RAD, & FMS disks) and it can also add a text file to the archive that will be displayed during extraction. Via the GUI interface, Dlmp-Win will invoke Dlmp and tell it what to do. Dlmp-Win version 1.0, Dlmp version 2.27. Requires AmigaOS 2.04+. Binary only. Author: Colin Bell (Dlmp-Win) and A.J. Brouwer (Dlmp)
- Planetarium** An astronomy program which displays and animates the planets of the solar system at specific times. Useful for quickly and easily determining the best times to view the planets, observing retrograde, etc. Version 1.0, OS 1.3, 2.x, 3.0 compatible. Shareware, binary only. Author: Jim Schwartz
- StatRam** Stat-RAM or 'SD0': is a very fast recoverable ram drive that takes advantage of FFS under WB2 or FFS International under WB2.1 or 3. This work is based on ASDG's 'VD0'. ASDG-RAM has been reliable for many years since it was placed in the PD. However it has always been slow because it uses OFS, or old file system. On an accelerated machines, SD0: is up to 7 times faster, and averages 5 times faster than the original VD0: It's also 4 to 5 times faster than RRD. It survives the deepest re-boot, even the ColdReboot of relicking a KS file. Version 1.5, binary only. Author: Richard Waspe
- TrashIcon** A WorkBench 2.x application icon to delete files. Puts an icon in possibly user defined position on the WorkBench screen, that deletes all files that are dragged onto it. This is version 1.4, an update to version 1.2 on disk number 839. Binary only. Author: Mark McPherson
- UnivConq** A strategy game where two human players battle for control of the universe. The game has several variables that allow the players to vary the density of planets, the initial number of ships, and the length of play. Status information is continually updated to allow the player to concentrate on strategy, not statistics. Includes digitized pictures and sound. Version 1.08. Compatible with WB 1.3 & 2.x. Binary only. Author: Randy Wing
- Fred Fish Disk 872**
Convert A units conversion utility inspired by "Units" (by Gregory Simpson) but is easier to use and can be customized by changing the data file (conv.dat) alone and does not require recompilation of the program. V1.3, binary only. Author: David Whitmore
- ToolManager** Part 2 of a 2 part release of the very popular program by Stefan Becker. This part contains LHA archives of the binary files and graphics. Part 2 can be found on disk number 873. ToolManager is a full featured program for either WorkBench or CLI tool management. Includes the ability to add menu items to the 2.x "Tools" menu, add WorkBench icons or dock Windows. Features multi-column docks that automatically detect largest image size, AREXX, sound and Locale support. Version 2.1, an update to version 2.0 on disk number 752. Includes source, lots of graphic images, and programmers support for using the toolmanager.library. Requires 2.x for full functionality. Author: Stefan Becker
- Fred Fish Disk 873**
Cross A program that creates crossword puzzles. Has a message data file to allow easy translation into almost any human language, with English and German currently supported. This is version 5.1, an update to version 4.1 on disk 537. Includes source in M2Amiga Modula-2. Author: Jurgen Weinelt
- Finl** A very versatile directory listing utility. It can examine the contents of files and display a short type description. In addition, Finl has a whole slew of options that allow you to filter files by file type, date, age, size etc., as well as recursive directory descending, and adjustable output formatting. So next to simply listing directories, Finl is extremely useful for creating hybrid commands that perform functions closely tuned to your specific needs. Version 1.15, binary only. Author: Peter Struijk
- MRIconSort** MRIconSort is a nifty little tool which will alphabetically sort and align your icons and optionally create icons for files and drawers which don't have them. If you have drawers with tons of icons which are a hopeless jumble, this program is for you! Version 1.01, binary only. Author: Mark R. Rinfret
- ToolManager** Part 2 of a 2 part release of the very popular program by Stefan Becker. This part contains an LHA archive of the source, TeX docs and programmer's support files. Part 1 can be found on disk number 872. ToolManager is a full featured program for either WorkBench or CLI tool management. Includes the ability to add menu items to the 2.x "Tools" menu, add WorkBench icons or dock Windows. Features multi-column docks that automatically detect largest image size, AREXX, sound and Locale support. Version 2.1, an update to version 2.0 on disk number 752. Includes source, lots of graphic images, and programmer's support for using the toolmanager.library. Requires 2.x for full functionality. Author: Stefan Becker
- Fred Fish Disk 874**
DFA NOT just another address utility. DFA(dress) features email support, dialing, different types of printing addresses, full commodity support, application icon, AREXX port, font sensitive windows and can be fully directed by the keyboard. This is version 1.23, lots of enhancements and bug fixes since version 1.1 on disk number 782. Shareware, binary only. Author: Dirk Federlein
- TWA** A commodity that remembers the last active window on any screen. If screens are shuffled, the window is automatically re-activated, when that screen is brought to front. Version 1.2, an update to version 1.0 on disk number 781. Binary only. Author: Matthias Scheler
- Fred Fish Disk 875**
ADoc A help utility for the Amiga. Features include automatic search of any work on which you clicked, ability to use AutoDoc and AmigaGuide files, support of locale.library, an AREXX port, and more. Version 3.01, an update to version 1.21 on disk number 747. Binary only. Author: Denis Gounelle
- APrt** A print utility with a full Intuition interface, a preview function, page selection, line numbering, multi-columns mode, customizable headers and footers, an AREXX port, an AppWindow, and more. Includes both English and French versions. Version 2.11, an update to version 1.40 on disk number 747. Binary only. Author: Denis Gounelle
- AZap** A 'new generation' binary editor, able to edit files, memory or devices like hard disks. It can open several windows at the same time, supports locale.library, and handles all OS3.0 file systems. This is version 2.04, an update to version 1.00 on disk number 759. Binary only. Author: Denis Gounelle
- Blanker** An attempt to provide the Amiga community with a future-compatible, easily expandable screen blanker. Provides a platform for others to write custom screen blanker modules and not have to worry about the difficulties associated with setting up a Commodities interface and dealing with concurrency problems. Version 2.3, includes source and several sample blanker modules. Author: Michael D. Bayne
- KillAGA** Allows you to run old, badly written, programs (mainly demos and some games) from your A1200/4000 hard disk without having to continually reboot and switch chip settings. On return from the program, the system returns to full AGA state. Version 2.0, binary only. Author: Jolyon Ralph
- SeekSpeed** Measures the seek performance of any valid device. It works by using the system's very accurate E clock and measures the time taken for seeking and reading varying numbers of sectors under both sequential and random access. Every test is performed 100 times if possible, and the average reported. GUI interface, can be run from the CLI or WB. Requires OS2.04+. Version 37.12, binary only. Author: Richard Waspe
- Fred Fish Disk 876**
AmyMiner An ultimate "XMiner-type" game that integrates all of the best aspects of the previous Amiga versions of the game. Options include: Automatically mark or clean the neighbours of a square. Safe start (no explosion at first click); Safe click (gadget-like behavior for squares); Question marks (for configuration analysis). You can also specify your own custom board settings. The game has a very useful pause option, sound effects, high-score tables and a very nice interface. It works under OS V1.3 or 2.0, NTSC or PAL. Version 1.1, an update to version 1.0 on disk number 851. Binary only. Author: Alain Laferriere
- BattleStar** A fun text-based adventure game. It is reminiscent of Dungeon (aka Zork) and Adventure. You start out on a space ship under attack and must get off and back to the planet. Ported from UNIX, with very little "amiga-ization". Runs from the CLI only. Includes source. Author: David Riggie, Amiga port by David Ingrebretsen
- Fred Fish Disk 877**
Lyapunovia A mindboggling colorful program that produces fractal pictures from a simple mathematical formula called "Lyapunov Space". Lyapunovia pictures vary from colorful candy to mean metal (or something), offering you everything you ever wanted in visual representation of mathematical abstractions. Lyapunovia has been tested on all Amigas from WB1.2 to 3.1. The program supports AGA graphics, floating point units, 68020+ CPUs, and 24-bit output (to 65000 x 65000 pixels!). A zoom factor of 10,000,000,000,000,000 is possible. Version 1.5, an update to V1.0 on disk 784. This is the full program, the difference between the unregistered and the registered version has been eliminated. Binary only, shareware. Author: Jesper Juul
- Fred Fish Disk 878**
bBasell An easy to use, versatile, yet full featured database program that will run on any Amiga. Search or sort on any field, print mailing labels, (un)delete records, mail merge, get reports in many formats, scramble files, flag records, and more. Fields are user-configurable, so bBase can be used to keep track of addresses, tape or video collections, recipe files, or anything else you can think of one program does it all! bBasell is a greatly enhanced successor to bBasell. Version 1.3, an update to version 1.1 on disk number 760. Shareware, binary only. Author: Robert Bromley
- DockBrushes** Fifty plus 16-color dock brushes for use with ToolManager, AmiDock, or just as icons. Author: David Voy
- DrChip** Four utilities to make your C programming life a little easier. Included are: ccBA C-source code indentation beautifier; flistgenerates lists of functions from either C or C++ files; hdtagVIM, Z, and emacs support tags; toproconverts source code to and from old K&R style to the new prototype-using style. Binary only. freeware. Author: Dr. Charles E. Campbell, Jr.
- Scypmon** Machine-language monitor with many features. Provides you with all functions like assembler, disassembler, search, transfer, fill, trackloadings etc. Version 1.7, fixes 2 nasty bugs of version 1.6 and should now run without errors. Binary only. Author: Joerg Bublath
- Fred Fish Disk 879**
DiskTestA Utility to test the integrity of floppy and hard disks, a la Norton Utilities. Version 2.10, an update to version 2.03 on disk 828. Requires AmigaDOS 2.04 or later. Public domain, includes source. Author: Maurizio Loreti
- Find** A pattern matching program which uses the weighted Levenshtein distance algorithm. Requires OS1.04 or later. Commodity and AREXX Support. Manual in AmigaGuide format. Version 1.0, includes source. Author: Karlheinz Klingbeil
- Millim** A utility that generates millimetered paper with linear or logarithmic scale (both in x and y) on a PostScript line printer (on whatever printer, with a PostScript interpreter like Post from Adrian Aylward, disk 669). Public domain, includes source in PostScript. Author: Maurizio Loreti
- Watcher** A little title-bar commodity which can be customized to show various information such as the free space on hard drive partitions, free memory, system time and date etc. Font and Overscan sensitive, can jump between public screens by clicking on it's Zoom gadget. Includes WatcherPrefs, a utility that allows you to customize what Watcher displays and its general behavior. Version V37, includes source. Author: Franz Hemmer
- Fred Fish Disk 880**
Oberon This is a freely distributable demo version of a powerful compiler for Oberon-2. Oberon-2 is one of the most modern object-oriented languages. This language was designed with the aim to increase the power of Modula-2 and to extend it with object-oriented facilities while reducing its complexity. This implementation features a parallel incremental garbagecollector, a runtime source-level debugger, fast compilation, optimized code, language extensions to access AmigaOS, etc. Version 3.0, an update to version 1.16 on disk 380. Binary only. Author: Fritjof Siebert
- SnapWindow** A small utility that allows you to attach window activation/pop window-to-front to function keys. This allows you to instantly find and activate the desired window. Also includes a sunmouse and screen blanker. Version 1.0, binary only. Author: Jason Scott Chvat
- To Be Continued.....
- In Conclusion**
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And furthermore...

OpalVision's creator, Gary Rayner



Gary Rayner with his creation.

Among the latest exports from Australia, is Opal Technology's *OpalVision*. While *OpalVision* is marketed and sold throughout the world by Centaur Development in Redondo Beach, California, the Australian enterprise, Opal Technology, is the original creator of *OpalVision* and is also the Australian distributor. Under the leadership of Gary Rayner, its young (22) chief executive, Opal Technology (also known as Opal Tech) is about to release its long-awaited Roaster chip and Video Suite products. Since these extensive video tools are available for both the NTSC and PAL markets, Opal Tech has become one of the first companies to offer a video and audio editing solution to videographers around the world.

Gary Rayner

Gary Rayner is an old hand at Amiga technology, he has been producing products for the Amiga since 1987. His first company created MIDI interfaces for the Amiga but his love of inventions started earlier.

"When I was about 2 years old, my parents caught me in the backyard with a shower head. I was determined that I was going to make a rocket. The only disappointing thing was I didn't know about propellants at that stage and it was a bit disappointing that it didn't take off." Stated a calm Mr. Rayner before the doors opened on the final day of The World of Commodore Amiga in Sydney.

Mr. Rayner's parents have several businesses. They own a catering business and his father has a large banana distributing and ripening business. This is where he learned about hardware.

"I designed a car headlight dimmer when I was ten years old to stick on a car so when a car

came towards you, the lights would dim automatically and then go back up when they went passed. It only had one bug and that was in the rain, when you went down a dip, you would see the reflection of your own head lights in the road, it would flash down and then you wouldn't see it. Then they would flash up and flash down. It was an interesting little invention."

However, it was not just inventions that caught his eye. At the age of twelve, he went to high school and was introduced to the cutting-edge of technology for the time, Apple II's. He invented a paint program that worked with an analogue joystick. "I have always been interested in art," stated the quiet Rayner.

"I saw some people using paint boxes on television shows and also at a television station where I had some job experience for a while." Rayner confided, "About this time the Amiga came out, and I think I had one of the first Amigas in Australia. I started playing around with some ideas of getting some more color out of it."

"My first prototype was six Amigas sticky-taped together. I was using one to provide the upper half of the red signal and one for the other half of the red signal so you had 256 levels of red, the same for green, and the same for blue. The six Amigas were working together so that I had a full 24-bit paint box system working back in 1987." Mr. Rayner said with a smile, "I was hoping I could get something together but I wasn't sure people would jump at the idea of buying six Amigas and using them together."

During this time, Mr. Rayner produced a MIDI interface, a disk drive for the Amiga, and a sound sampler. "The problem was that kicking these off, you went for a long period of time without any income. You finally reached the bottom of the barrel. You went out, got a job, and

saved some money. When I finally started designing the video paint box system, I sold my car and left my job and pushed it all into designing." That first system was *ColorBurst*, but due to some "commercial incompatibilities" it did not do as well as it could have. So he went back to designing a new system.

"At first, *OpalVision* was an all-in-one box. It didn't have the power that the current version has, but we didn't realize that not many people want everything all at once. Some people want a video paint box for animation, other people want genlocking and frame grabbing, and other people want a complete setup to do everything for them. This is when we came upon the idea that the most powerful arrangement would be to make it modular so people could buy what they want when they wanted it. You can add things as time goes by so that everything is loadable to make it as obsolescent proof as electronics can be these days."

Gary Rayner holds the title of Design Director on the *OpalVision* project. While he designs a lot of the hardware, he works with other designers in a team effort. He is also involved with the software interfaces and then hands these off to a software programmer for coding.

The original *OpalVision* was called *Frame Grabber/Genlock for the OpalVision*. It could switch between two video sources. But, Rayner stopped production on the device right before shipping—he was not satisfied. "It had to be better by a wide margin than anything else on the market. The whole concept was to make a Video Suite—a complete video production studio."

"It had to have high-quality audio with good control. It had to have superior digital video effects. It had to have much better source inputs and outputs. Composite video was just not good enough."

He wanted the best, because he wanted to sell to a wide market. "We are not selling so much to Amiga owners. You will find that a lot of people will become Amiga owners because they will become *OpalVision* owners."

"We have some effects today that cannot be done on a system for less than \$30,000. We have three-dimensional rotations in real time with live video. We can rotate in all three axis—X, Y, and Z."

"While I don't want to compare *OpalVision* with the Toaster, people are going to make the comparison. It wasn't designed to be a Toaster replacement. *OpalVision* is full RGB video all the way through so that it is the highest quality in which you can possibly transfer video. The Toaster is composite which is the lowest form in which video can be transferred."



Just part of the *OpalVision* team from left to right: Prashant Maharaj, James Flynn, Rob Roy, Gary Rayner, Felicity Butler, Greg Niles.

(continued on page 68)

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(please check all that apply)
O 1. Amiga 500 O 4. Amiga 2500
O 2. Amiga 1000 O 5. Amiga 3000
O 3. Amiga 2000 O 6. Do not own an Amiga
- B. If none of the above, which do you plan to buy soon?
O 7. Amiga 3000 O 9. Amiga 2000
O 8. Amiga 2500 O 10. Amiga 500
- C. Which Amiga hardware product do you plan to buy next?
O 11. memory expansion O 15. modem
O 12. hard drive O 16. music tool
O 13. IBM emulators O 17. video product
O 14. printer O 18. accelerator
O 19. other (please specify): _____
- D. Which Amiga software product do you plan to buy next?
O 20. C language O 27. spreadsheet
O 21. Fortran language O 28. database
O 22. Modula-2 language O 29. financial
O 23. Assembly language O 30. video
O 24. BASIC language O 31. graphics
O 25. entertainment O 32. music
O 26. telecommunications O 33. other (please specify): _____
- E. How much money are you likely to spend on all Amiga product purchases this year?
O 34. \$0-\$250 O 38. \$1501-\$2000
O 35. \$251-\$500 O 39. \$2001-\$4000
O 36. \$501-\$1000 O 40. over \$4000
O 37. \$1001-\$1500
- F. Where do you buy Amiga products?
O 41. local Amiga Dealer O 43. manufacturer
O 42. discount department store O 44. mail order
- G. How many times have you purchased an Amiga product after seeing it advertised in AC?
O 45. frequently O 47. once
O 46. occasionally O 48. never
- H. How do you obtain your copy of AC monthly?
O 49. subscribe (how long? _____ years)
O 50. buy at local Amiga dealer
O 51. buy at bookstore/newsstand/software store
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O 53. _____ others, in addition to myself
- J. How do you read AC each month? (please check one):
O 54. read virtually everything, cover-to-cover
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O 56. check table of contents and maybe read 1-2 articles
O 57. read my favorite column(s) only
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106	107	108	109	110	226	227	228	229	230
111	112	113	114	115	231	232	233	234	235
116	117	118	119	120	236	237	238	239	240
121	122	123	124	125	241	242	243	244	245
126	127	128	129	130	246	247	248	249	250
131	132	133	134	135	251	252	253	254	255
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216	217	218	219	220	336	337	338	339	340

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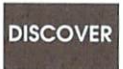
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